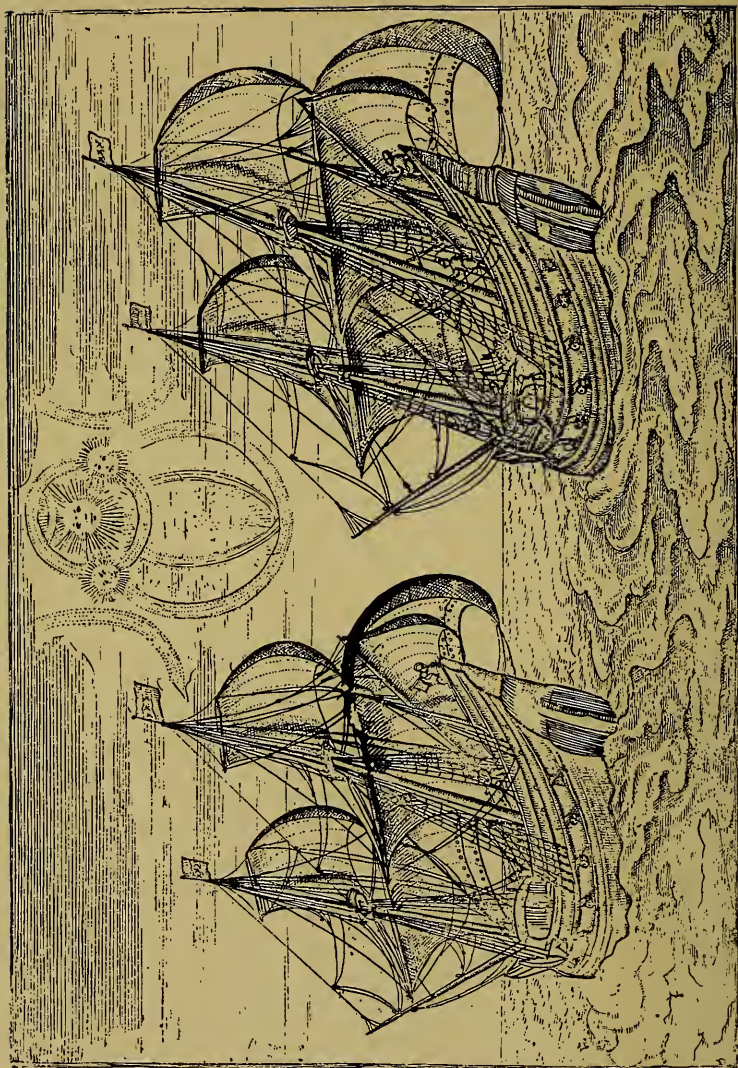






ARCTIC EXPLORATION



SAILING THE ARCTIC SEAS

ARCTIC EXPLORATION

BY

J. DOUGLAS HOARE

WITH EIGHTEEN ILLUSTRATIONS AND FOUR MAPS

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A MAP OF THE
NORTH EAST
 AND
NORTH WEST
 Parts of the
POLE

Cape
 Head
 Round
 Point
 River
 Sound

ARCTIC EXPLORATION

CHAPTER I

EARLY VOYAGES

THE story of the first few centuries of Arctic exploration can, of course, never be written. The early Norsemen, to whom must go the credit for most of the first discoveries, were a piratical race, and their many voyages were conducted, for the most part, in a strictly business-like spirit. Occasionally one of them would happen on a new country by accident, just as Naddod the Viking happened upon Iceland in 861 by being driven there by a gale while on his way to the Faroe Islands. Occasionally a curious adventurer would follow in the footsteps of one of these early discoverers, but no serious attempt was made to widen the field of knowledge thus opened up, unless the Norsemen saw their way to entering upon commercial relations with the natives, to the great disadvantage of the latter.

Rumours of the existence of Iceland, or Thule as it was then called, were first brought home by Pytheas, while Irish monks are known to have stayed there early in the ninth century, but probably the first attempt to colonise it was made by Thorold about a hundred years after Naddod's visit. This worthy Viking, feeling it advisable to leave his native land



AN OLD MAP OF THE POLAR REGIONS

FROM NARBOROUGH'S "VOYAGES" (1694)

The erroneous intersection of Greenland by Frobenius's Strait should be especially noted

after a quarrel with a relative, during the course of which the latter had been killed, set his course for Iceland, and made himself a new home there. Shortly afterwards his son Erik, who seems to have inherited his father's taste for murder, followed him to his new abode, and later on, when on a voyage of adventure, set foot upon Greenland. Erik's son, Leif, who was also of a roving disposition, sailed far westward in 100 A.D., and landed either on Newfoundland or at the mouth of the St Lawrence, thus anticipating the discovery of America by Columbus by nearly five hundred years.

It was not until the end of the fifteenth century that the first serious attempts at Arctic exploration were made by John Cabot and his son Sebastian. John Cabot was a Venetian, who settled at Bristol probably about the year 1474, and to him belongs the honour of being the first to suggest the possibility of finding a north-west passage to India. In 1496 he received a commission from Henry VII. to sail out for the discovery of countries and islands unknown to Christian peoples, and though the real object of his voyage, discreetly veiled beneath these purposely vague terms, was not attained, he immortalised his name by the discovery of Nova Scotia and Cape Breton Island. The history of the earlier Cabot voyages is sadly obscure, and was rendered more so by Sebastian himself, who in his later years seems to have claimed discoveries which properly belonged to his father. Sebastian is unquestionably the hero of his own account of the expedition of 1496, which is given by Hakluyt:—

“When news were brought that Don Christoval

Colon (i.e. Christopher Columbus), the Genoese, had discovered the coasts of India, whereof was great talke in all the court of King Henry VII., who, then reigned, insomuch that all men with great admiration affirmed it to be a thing more divine than humane to saile by the West into the East where spices growe, by a way that was never knowen before, by this fame and report there increased in my heart a great flame of desire to attempt some notable thing. And understanding by reason of the Sphere (i.e. globe) that if I should saile by way of the Northwest I should by a shorter tract come into India, I thereupon caused the king to be advertised of my devise, who immediately commanded two Carvels to be furnished with all things appertayning to the voyage, which was as farre as I remember in the year 1496, in the beginning of Sommer. I began therefore to sail toward the Northwest, not thinking to find any other land than that of Cathay and from thence to turn toward India ; but after certaine days, I found that the land ranne towards the North, which was to me a great displeasure. Nevertheless, sayling along by the coast to see if I could finde any gulfe that turned, I found the lande still continent to the 58th degree under our Pole. And seeing that the coast turned toward the East, despairing to finde the passage, I turned backe againe, and sailed downe by the coast of that land toward the Equinoctiall (ever with intent to finde the saide passage to India) and came to that part of this firme lande which is nowe called Florida, where my victuals failing, I departed from thence and returned into England, where I found great tumults among the people, and preparation for warres

in Scotland, by reason whereof there was no more consideration had to this voyage."

John Cabot made a second expedition in 1498, and probably died soon after. Sebastian, who had accompanied his father on both his American voyages, finding the English Government little inclined to spend money on further exploration, transferred his services to the King of Spain, for whom he did excellent work by examining the coast of South America. In 1548, however, he returned to England, and Edward VI. did him the honour that was his just due, by settling on him the sum of 500 marks (£166, 13s. 4d.) a year for life, and, according to Hakluyt, creating him Grand Pilot. Never did a man deserve his honours more, for, by founding the company of Merchant Adventurers, of which he was the first governor, he did much to extend the foreign commerce of the nation, and, by fostering a spirit of enterprise, he paved the way for that immense success won by our sailors and merchants during the next century.

The first purely British expedition was that of Robert Thorne, of Bristol, at whose instigation, say Hall and Grafton, "King Henry VIII. sent out two fair ships, well manned and victualled, having in them divers cunning men to seek strange regions, and so they set forth out of the Thames, on the 20th day of May, in the nineteenth yere of his raigne, which was the yere of our Lord 1527." The "fair ships" had as their objective no less a place than the North Pole, but the men do not seem to have been sufficiently "cunning" to make much headway against the difficulties that beset their path, and the chronicles

of the time are singularly reticent concerning their doings.

The voyage of the *Trinitie* and *Minion*, which sailed in 1536, is one of the most disastrous on record. The expedition was sent out with a view to exploring North-West America, and it reached the coast of Newfoundland in safety. It seems, however, to have been hopelessly under-provisioned, and the men, having little to eat on board and finding themselves unable to supplement their scanty store on land, took to cannibalism, and would all have perished but for the timely arrival of a French ship, which they promptly set upon and misappropriated. We are not told what happened to the unfortunate Frenchmen, but Henry VIII. is reported to have compensated such as survived.

Hitherto the energies of our sailors had been principally devoted to discovering a north-west passage to India, Cathay, and the Indies. When, however, Cabot returned from Spain and was made "Governour of the mysterie and companie of the marchants adventurers for the discovery of regions, dominions, islands and places unknown," he promptly showed how well fitted he was for that honourable post by suggesting that, as the voyages towards the north-west had not been attended by much success, it would not be amiss to try a change of tactics and to attempt to find a way to Cathay by the north-east. The idea was taken up enthusiastically, and, as this was the first extended maritime venture made by us in distant seas, the utmost care was exercised over the preparations. Three ships were specially built for the enterprise,

and were fitted out in the most substantial manner possible. The admiral of the fleet, the *Bona Esperanza*, 120 tons, was placed under the command of Sir Hugh Willoughby, and carried thirty-five persons, who included six merchants. The *Edward Bonaventure*, 160 tons, was commanded by Captain Richard Chancellor, her company consisting of fifty, including two merchants; and the *Bona Confidentia*, 90 tons, was commanded by Cornelius Durfourth, and carried twenty-eight souls, also including two merchants. These three ships sailed from Ratcliffe on May 20, and, after tracing the coast of Norway, rounded the North Cape in company. Here a storm separated the *Bonaventure* from her sister ships, and, fortunately for her and her company, drove her to Vardö, in Norway. Willoughby and his two ships succeeded in making the coast of Lapland, and spent the winter on the desolate coast of the Kola Peninsula. In those days, unfortunately, but little was known of the art and science of wintering in the Arctic regions, and every member of the company perished miserably of scurvy.

Chancellor, after waiting awhile at Vardö in the hope that the rest of the fleet would join him there, determined to push on on his own account, and he eventually succeeded in reaching the north coast of Russia. The intelligence of his arrival was conveyed to the Czar, Ivan Vasilovich, who was so much interested in what he heard that he invited him to Moscow. There Chancellor spent the winter, and with such ardour did he forward the interests of his country, that he laid the foundations of that great trade between England and Russia which has flourished

ever since. It is worthy of note that his first landing place is now marked by the great seaport of Archangel.

Chancellor's second expedition was less fortunate, for the gallant sailor lost his life in his attempt to continue his work. He reached Russia in safety, and once more repaired to Moscow, where he continued the negotiations which he had previously begun. While returning home, however, his ship was wrecked in Pitsligo Bay on the east coast of Scotland and he was drowned.

The expedition of Chancellor and Willoughby had, of course, been primarily sent out with a view to finding a north-east passage to China, and these negotiations with Russia were a side issue not originally contemplated by its promoters. Consequently, while Chancellor was away on his second voyage, the Company of Merchants Adventurers equipped a second expedition for the discovery of the North-East Passage, which they placed under the command of Stephen Burrough. The *Searchthrift*, as the ship was named, set sail on April 23, 1556, but it was stopped by fog and ice, and Burrough was obliged to return to England without accomplishing his mission, though he succeeded in discovering Nova Zembla.

The next English mariner to win fame for himself by his adventures in the Arctic seas was Martin Frobisher, who, under the auspices of Queen Elizabeth, the Earl of Warwick, a well-known merchant named Lok and others, fitted out a fleet of three cockle-shells, the united burden of which was only 73 tons, and set sail in 1576, with intent to discover the North-West

Passage. The chief result of Frobisher's voyage was a vast mass of very misleading information. On reaching Davis Strait he came to the conclusion that it bisected Greenland, an error which retained its place in the maps for some three centuries. In the middle of the strait he discovered an island which did not exist, while he brought home with him the interesting information that large deposits of gold existed on the shores which he had visited. On the strength of this all sorts of plans for working these deposits were taken up, which only ended in the financial loss and bitter disappointment of their promoters. Frobisher undertook the command of two subsequent expeditions, but neither of them resulted in any discoveries of much value. His name, however, will always be kept alive by the discovery of Frobisher and Hudson Straits, both of which he entered on his first journey.

We now come to by far the most important of these early voyages, namely that made by John Davis, of Sandridge, in 1585. Davis was a splendid old seadog of the finest type—shrewd, patient, and of absolutely indomitable courage. So high was his reputation, that when a number of merchants, headed by William Saunderson, determined to fit out a new expedition for the discovery of the North-West Passage, they offered him the command, and their offer was promptly accepted. The expedition, which consisted of two ships, the *Sunshine*, of 50 tons, and carrying twenty-three men, and the *Moonshine*, 35 tons, and carrying nineteen men, started on June 7, and by July 19 it was off the south-east coast of Greenland, where Davis heard for the first time the grinding together of the great ice-

packs. The shore looked so barren and forbidding—"lothsome" is the epithet which Davis applied to it—that he named it "Desolation." Rounding the southern point of Greenland and bearing northward, he soon reached lat. 64° , where he moored his ships among some "green and pleasant isles," inhabited by natives who were very friendly disposed and quite ready to trade with him. From these he learnt that there was a great sea towards the north and west, so he set sail and shaped his course W.N.W., expecting to get to China. Crossing the strait which now bears his name, he sighted land in $66^{\circ} 40'$ and anchored in Exeter Sound. The hill above them they named Mount Raleigh; the foreland to the north, Cape Dyer; and that to the south, Cape Walsingham—names which they still bear. The season was too far advanced for him to attempt to explore the sound, but he discovered the wealth of those regions in whales, seals, and deerskins—a discovery which, it need hardly be said, was very highly valued by the merchants who had equipped the expedition.

As was only natural, both Davis and his patrons were anxious to continue the discoveries thus auspiciously begun, and May 7, 1586, saw him starting on his second expedition, his fleet strengthened by the addition of the *Merimade*, a ship of 120 tons. She did not prove of very much service, however, for she deserted in lat. 66° , and Davis went on his way without her. He did not succeed in adding anything of value to his discoveries of the previous year, merely coasting southward along Labrador, without observing the entrance to Hudson Strait.

Davis's third expedition left on May 19, 1587, and

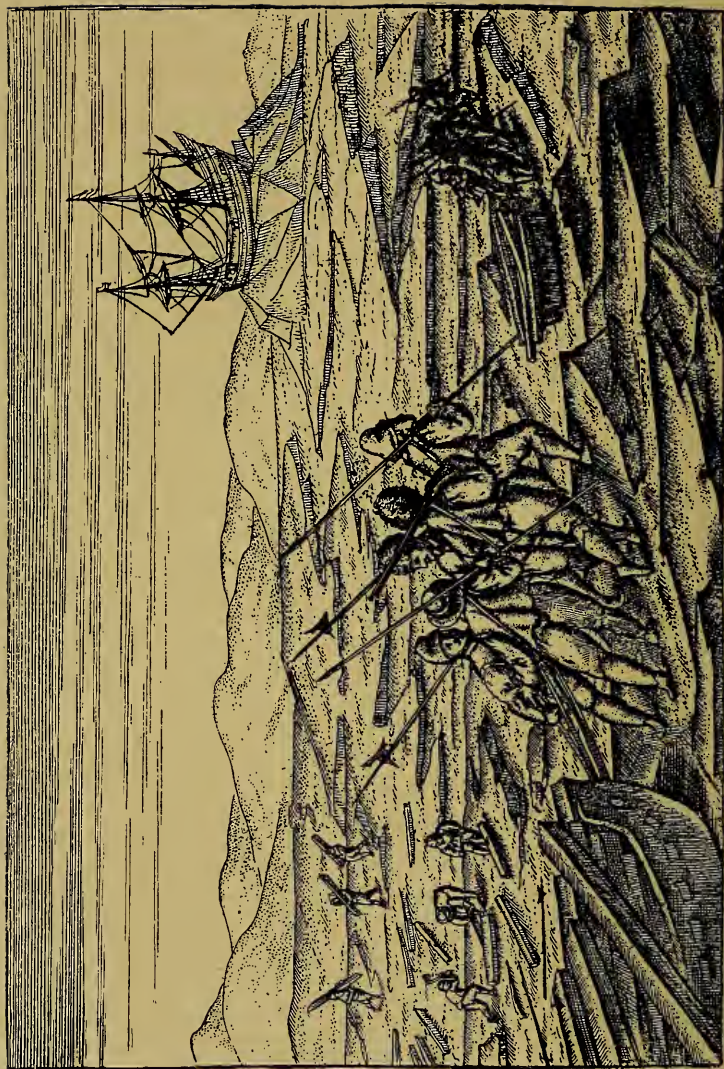
consisted of three ships, the *Elizabeth*, the *Sunshine*, and the *Ellen*. On reaching lat. $67^{\circ} 40'$ he left two of his ships to prosecute fishing, and sailed on by himself on a voyage of discovery. He came, as he tells us himself, "to the lat. of 75° , in a great sea, free from ice, coasting the western shore of Desolation. . . . Then I departed from that coast, thinking to discover the north parts of America. And after I had sailed toward the west near forty leagues, I fell upon a great bank of ice. The wind being north, and blew much, I was constrained to coast towards the south, not seeing any shore west from me. Neither was there any ice towards the north, but a great sea, free, large, very salt and blue, and of an unsearchable depth. So coasting towards the south, I came to the place where I left the ships to fish, but found them not. Thus being forsaken and left in this distress, referring myself to the merciful providence of God, I shaped my course for England, and unhopd for of any, God alone relieving me, I arrived at Dartmouth. By this last discovery it seemed most manifest that the passage was free and without impediment toward the north; but by reason of the Spanish fleet, and unfortunate time of Master Secretary's death, the voyage was omitted, and never since attempted." So ended the Arctic voyages of John Davis. "The discoveries which he made . . .," says Sir John Ross, "proved of great commercial importance; since to him, more than to any preceding or subsequent navigator, has the whale fishery been indebted."

In the meantime interest in the North-East Passage had by no means subsided; indeed, it had actually

been quickened by Philip II.'s accession to the throne of Portugal and by the consequent fact that Spain and Portugal, not content with already holding the monopoly of the route to the East, attempted to make their influence felt upon the trade operations of the nations of Northern Europe. It was in 1580 that Arthur Pet, in the *George*,^m and Charles Jackson, in the *William*, sailed from England under the auspices of the Muscovy Company, with instructions to push as far east as they possibly could. The expedition was singularly ill-found, for the burden of the *George* was only 40 tons, her crew consisting of nine men and a boy, while the *William* was but half the size of her sister ship, and carried a crew of five men and a boy. The adventurers, however, made light of the difficulties that beset them, and, after making Nova Zembla in the neighbourhood of the South Goose Cape, they turned south and, coasting along Waigat Island, entered the mouth of the Pechora. Thence they pushed their way into the Kara Sea, being the first sailors from Western Europe who ever achieved such a feat.

The Muscovy Company does not seem to have considered it worth its while to proceed with the exploration of these unattractive regions, but the Dutch, who were no less anxious than the English to find a North-East Passage, sent out in 1594 an expedition which consisted of three ships, commanded by Willem Barents, Nay, and Tetgales. Barents attempted to find a passage round the north of Nova Zembla, while his companions turned south and made their way into the Kara Sea. The reports which these pioneers brought home with them so encouraged their fellow-countrymen,

that they were sent off with a fleet of seven ships in the following year to continue their discoveries. This expedition penetrated a little further along the coast, but it by no means succeeded in fulfilling its mission, and the States-General became rather chary of spending any more money upon the venture. Accordingly they contented themselves with offering a large reward to any person or persons who could find a practicable passage to China, and left it to private enterprise to do the rest. The result of this step was that a company of merchants fitted out two ships of discovery in 1596, and gave the command of one of them to John Cornelius Ryp and of the other to Heemskeerck, appointing Barents chief pilot to the latter. On June 9 they discovered an island which they called Bear Island, in memory of a terrific encounter that they had with a polar bear there. They now found that their progress eastwards was checked by ice, and they accordingly stood north, with the result that it fell to their lot to be the discoverers of Spitzbergen. They spent two days in a bay which appears to have been that known as Fair Haven, and then, after an ineffectual attempt to push further north, they returned to Bear Island, where, owing to a difference of opinion as to the best course to pursue, they parted company, Ryp revisiting the coast of Spitzbergen, while Barents set his course for Nova Zembla. We may mention parenthetically that Heemskeerck was not himself a sailor, and that, in consequence, the lion's share of the honours which this expedition earned has always been given to Barents, on whom the navigation of the ship necessarily devolved.



STRANDED IN NOVA ZEMBLA

The rest of the story of this unfortunate voyage is one of terrible trials borne with heroic fortitude. While coasting along the shore of Nova Zembla, Barents suddenly found himself in the midst of heavy ice, and time after time his ship only just escaped destruction by the squeezing together of the floes. His duty to his employers always being uppermost in his mind, he bravely attempted to push on to the east, but he soon found that that was impossible, and that all his efforts must be directed towards getting his ship home. As he drew near the shore, however, in the hope of finding a little open water there, the ice bore down upon it, crushed his boats to pieces and almost annihilated his ship. To add to his misfortunes, a northerly gale arose, which placed him in an even more dangerous position than before. He now found himself to the east of the island in an inlet which he named Ice Haven, but which is now called Barents Bay, with his retreat cut off both to the north and to the south. There was nothing for him to do, therefore, but to make the most of an exceedingly bad business and spend the winter where he was. Now it must be remembered that no traveller had ever yet passed a winter in the Arctic regions, and that Barents and his men were totally unprepared for such an emergency. They had little food, less fuel, no proper clothes and, last but by no means least, their ship was not suited for a winter abode. In the midst of their misfortunes, however, they kept up their hearts, and instantly set about building a hut wherein they could spend the long, dark months.

Fortunately for them there was an abundance of

driftwood on the island "driven upon the shoare, either from Tartaria, Muscovia, or elsewhere, for there was none growing upon that land, wherewith, as if God had purposely sent them to us, we were much comforted." This driftwood lay at a distance of some eight miles from the site of this house, and the labour of fetching it was enhanced by the darkness which was now setting in, and by the ferocity of the bears which haunted the neighbourhood and were a constant source of danger to the party. The Dutchmen, however, worked with a will, and by October 24 they had moved into their new abode, one of the features of which was a wine cask, with a square opening cut in its side, which was set up in a corner and used as a bath.

The bears afforded them some fresh meat up till November 3, when they and the sun disappeared at one and the same time. After this they occasionally succeeded in trapping foxes, but the cold was so intense that they were often unable to venture out of the house for days together. "It blew so hard and snowed so fast," writes Gerrit de Veer, the chronicler of the expedition, "that we should have smothered if we had gone out into the air; and to speake truth, it had not been possible for any man to have gone one ship's length, though his life had laine thereon; for it was not possible for us to go out of the house. One of our men made a hole open at one of our doores . . . but found it so hard wether that he stayed not long, and told us that it had snowed so much that the snow lay higher than our house." Again, "It frose so hard that as we put a nayle into our mouths

(as when men worke carpenter's worke they use to doe), there would ice hang thereon when we tooke it out againe, and made the blood follow." Or, "It was so extreme cold that the fire almost caste no heate; for as we put our feete to the fire, we burnt our stockings before we could feele the heate. . . . And, which is more, if we had not sooner smelt than felt them, we should have burnt them quite away ere we had knowne it." De Veer also tells us that the clothes on the backs even of those who sat near the fire were frequently covered with hoar-frost, and that the beer and all the spirits were frozen solid. Yet in the midst of all this he was able to make the following entry in his journal: "We alwaies trusted in God that hee would deliver us from thence towards sommer time either one way or another. . . . We comforted each other giving God thanks that the hardest time of the winter was passed, being in good hope that we should live to talke of those things at home in our owne country." It was in this spirit of patient resignation that the brave Dutchmen met all their troubles.

Even when the sun returned it brought them but little relief from their sufferings, for the intensity of the cold seemed to increase, and there was no hope that the ice in their harbour would break up early. The ship was so badly damaged that she could not survive the voyage home, so they set about repairing the boats as best they could, with a view to crossing in them the thousand miles of sea that lay between them and Lapland. At last the time came for them to make their departure, but Barents was now so ill that he had to be taken to the boat on a sledge. His courage, however,

was still indomitable, as this passage in De Veer's account shows: "Being at the Ice Point the maister called to William Barents to know how he did, and William Barents made answer and said, Quite well, mate. I still hope to be able to run before we get to Wardhuus. Then he spak to me and said: Gerrit, if we are near the Ice Point, just lift me up again. I must see that point once more." His courage, however, was greater than his strength, and on June 20, six days after the start, the end came. We quote our chronicler once more: "William Barents looked at my little chart, which I had made of our voyage, and we had some discussion about it; at last he laid away the card and spak unto me saying, Gerrit, give me something to drink and he had no sooner drunke but he was taken with so sodain a qualme, that he turned his eies in his head and died presently. The death of William Barents put us in no small discomfort, as being the chiefe guide and onely pilot on whom we reposed ourselves next under God; but we could not strive against God, and therefore we must be content."

The sufferings of the party of fifteen on their terrible voyage over the stormy and ice-laden sea were scarcely less terrible than those which they had endured on the island. Such was their courage and determination, however, that they at last reached Lapland in safety, where they had the satisfaction of finding Cornelius Ryp, on whose vessel they were conveyed back to Holland.

CHAPTER II

FROM HUDSON TO PHIPPS AND NELSON

WITH the voyages of Weymouth, Knight, and Hall, which occupied the first few years of the seventeenth century, we need not concern ourselves at all, for they resulted in no discoveries of any importance. In the year 1607, however, Henry Hudson started off on the first of that series of travels by which his name became famous, and during the course of which he succeeded in carrying the British flag to places that had never before been trodden by the foot of civilised man.

As has already been seen, the north-west and north-east passages to the Indies had been tried and found wanting. British merchants, however, were by no means disposed to let Spain and Portugal retain their lucrative monopoly without making a struggle to wrest it from them, so they determined to send out a fresh expedition which should attempt to force its way to the land of gems and spices over the North Pole itself. The command of this expedition was entrusted to Henry Hudson, a seaman of such daring and skill that he was well able to accomplish the work if it lay within the power of a human being to do so. Hudson started off from the Thames on May 1, 1607, in a small barque which was manned by ten men and a boy, and made

direct for the east coast of Greenland. By June 22 he had reached lat. $72^{\circ} 38'$, where he discovered the land which still bears his name, the chief promontory of which he named Cape Hold-with-Hope. He then set his course for Spitzbergen, which, as we have seen, had been first sighted by Barents eleven years earlier, and there he reached the high latitude of $80^{\circ} 23'$. His provisions being now nearly exhausted, he was obliged to return home.

On his second voyage he attempted to discover a north-east passage round Nova Zembla, but was so hampered by ice that he was unable to proceed far on his way, while the only geographic result of his third voyage was the discovery of the Hudson River. These early expeditions, however, though they achieved little in the way of discovery, proved of great commercial value, for they gave rise to the great Spitzbergen whale fishery.

Hudson's fourth and last voyage, that of 1610, was organised by Sir John Wolstenholm and Sir Dudley Digges, who were convinced of the existence of the North-West Passage, and felt that Hudson was the man to find it. Accordingly, Hudson sailed on April 17 in the *Discovery*, a ship of 55 tons, which was provisioned for six months. By June 9 he had reached Frobisher Strait, and here a contrary wind arose which compelled him to ply westward into Hudson's Bay. Several British seamen had already visited the mouth of the strait, and it is believed that Portuguese fishermen had actually entered the bay; but the terrible circumstances which attended Hudson's voyage to it made it only natural that it should be

named after him in commemoration of his achievements and his fate.

The *Discovery* had penetrated the bay to a distance of over three hundred miles further than ever an English ship had penetrated it before when she was beset by ice, and all chance of retreat was cut off. As we have already seen, she was only provisioned for six months, and the unfortunate crew found themselves, in consequence, with starvation staring them in the face. Hudson, fortunately, was a man of resource, and he lost no time in organising hunting and fishing parties which provided his party with sufficient provisions to tide over the winter. Had his crew remained faithful to him all might have been well, but disaffection broke out early in the winter, which, gathering force as the store of provisions grew more and more scanty, broke out into open mutiny in the spring. The ringleaders were the former mate and boatswain, whom Hudson had been obliged to displace for using improper language, and a young man named Greene, a protégé of Hudson, who repaid his benefactor's kindness by deserting him when he most needed friends. These men, seeing that when the ship broke out of winter quarters in June there were barely fourteen days' provisions left for the whole crew, determined to place Hudson and eight other men in a boat, and, leaving them to shift for themselves, to sail home for England. This heartless plan was promptly carried into execution. Hudson was seized and bound when he came out of his cabin, and with five sick men, John Hudson and John King, the carpenter, who bravely refused to join the mutineers, was thrown into a boat and

deserted. Of the unfortunate castaways nothing more was ever heard, and the most careful search of Sir Thomas Button, who examined the whole of the western shore of the bay, failed to discover any clue to their fate. Of the mutineers, Greene and four others were killed in a fight with the natives, while the rest only just succeeded in reaching England.

The voyages of Hall in 1612 and Gibbons in 1614 did not result in much, but in 1615 William Baffin started out on the first of his two expeditions which were destined to add so much to the world's store of knowledge of the Arctic seas. Baffin, who was described by Sherard Osborn as "the ablest, the prince of Arctic navigators," was in 1615 appointed by the Merchants Adventurers pilot and associate to Richard Bylot, of the *Discovery*, which was now to make her fourth voyage in search of the North-West Passage. Making first for Hudson Strait, they soon discovered that they were being led into a blind alley. As the conditions, however, did not permit them to extend their voyage much that season, they were obliged to return home. In the following year, however, they were sent out once more by the Merchants Adventurers, and on this occasion they determined to push on north along the coast of Greenland. On May 30 they reached Sanderson's Hope, Davis's farthest point, and there they entered upon an entirely new field of discovery. With such energy did they apply themselves to the work that they had crossed Melville Bay by the beginning of June, and were sailing merrily on their way past Cape York, Cape Dudley Digges, and Whale Sound. At last, when they had exceeded

Davis's farthest north by over three hundred miles, their triumphant career was stopped at the entrance to Smith Sound, within sight of Cape Alexander. This latitude, $77^{\circ} 45'$, remained unequalled for over two centuries.

Unable to proceed any further to the north, Baffin and Bylot determined to sail south-west, and to see if they could not add to their growing list of discoveries on their homeward journey. Their hopes were amply fulfilled, for on July 12 they found themselves off the entrance to Lancaster Sound, which was the gate, as it afterwards proved, to the North-West Passage. The ice, unfortunately, did not permit them to enter the Sound, so they made for the coast of Greenland, where they rested their men prior to their return to England.

For the next hundred years or so very little was done in the way of Arctic discovery. A Dane of the name of Jens Munk started out to seek for the North-West Passage, and succeeded in making a few discoveries in Hudson's Bay. In 1631, again, Captain Luke, alias "North-West," Fox sallied forth on the same mission, bearing with him an epistle from the King of England to the Emperor of Japan, which, however, remained undelivered. The work which he did was not of much value, but he made up for this deficiency by writing a very humorous account of his experiences. Captain James, who went exploring in the same year, seems to have been dogged by ill-luck from the beginning to the end of his voyage, and Barrow describes his narrative of it as "a book of lamentation and weeping and great mourning."

Though, however, very little was done in the way of exploration during the second half of the seventeenth century, great strides were made in the development of the country already explored by the formation of the famous Hudson Bay Company, which for two hundred years did a tremendous trade in Northern Canada. The inception of this Company was mostly due to a certain French Canadian of the name of Grosseliez, who, after an ineffectual attempt to induce the French Government to consider his schemes for founding a great industry, came to England, where he obtained the ear of Prince Rupert. The Prince sailed for Hudson Bay with Grosseliez, saw the possibilities of the country, and obtained from King Charles a charter, dated 1669, which conferred on him and his associates, exclusively, all the trade, land, and territories in Hudson's Bay. The charter further ordained that they should use their best endeavours to find a passage to the South Sea, but the Company soon became so rich from its trade that it seems to have conveniently forgotten this clause.

Occasionally, it is true, it attempted to do something in the way of exploration, but these efforts were for the most part only half-hearted, and resulted in little. In 1719, for example, James Knight, allured by reports of mines of pure copper by a great river to the north, gave the Company to understand that he would call upon the authorities to examine their charter unless they arranged an expedition and appointed him its leader.

Very reluctantly they consented to do as he wished, and equipped two ships for the purpose of surveying

the northern coast of their territories. Not a single member of the expedition returned, and nothing was known of their fate until, forty years later, a quantity of wreckage was found on Marble Island.

With the exception of Middleton's expedition of 1741, during the course of which Wager Inlet, Repulse Bay, and Frozen Strait were discovered, nothing much more was done in the way of Arctic exploration for the next fifty years. In 1769, however, the Company determined to make another effort to find the mines of copper of which the natives brought so glowing an account, and with this end in view they sent out an overland expedition under the command of Samuel Hearne. This expedition, which started out in November, was a complete failure, because it began its work too late in the year, while the second expedition, which left in February, failed because the preparations were inadequate. Warned by these two experiences, Hearne sallied forth once more in December 1670, and on this occasion he claimed to have found the mouth of the Coppermine River. His observations, however, were rather hazy, and it is doubtful whether he really reached the Polar Sea. The end of his journey was marred by an unfortunate collision between his Indian guides and a tribe of Eskimos, during the course of which all the unfortunate natives were massacred. The effects of this incident were to be felt later on, when Franklin, visiting those inhospitable shores with his gallant companions, was regarded with such suspicion by the Eskimos that he could hardly obtain that assistance which he so sorely needed.

One other early attempt to reach the Polar Sea

by the land route deserves to be recorded: that of Alexander—afterwards Sir Alexander—Mackenzie, the discoverer of the river which bears his name. Having been led to believe by the accounts of Indians that the sea could be reached by a large river issuing from the Great Slave Lake, he determined to test the story himself, and set out on June 3, 1789. The difficulties in his way were innumerable, for not only was the river broken up by dangerous rapids, but it was only after infinite trouble that he could induce any guides to accompany him, for the natives believed the river to be peopled by monsters, who were ready to devour the unwary traveller without the least provocation. However, he succeeded in reaching the sea near Whale Island, and had the satisfaction of knowing that the tales of the Indians were true, though he was unable to use his knowledge for any practical purpose.

Meanwhile, Russia was busily opening up the north-east coast of Siberia, partly with a view to getting some control over the unmanageable Chukches, the only Siberian tribe who succeeded in resisting their somewhat rough and ready methods, and partly with a view to developing trade in that direction and to discovering whether or not the Asiatic and American continents were united. Many expeditions set out with these ends in view, among them being those of Ignatieff, Dshneff, Alexieff, and Ankudinoff, but of these it is impossible to give a detailed account here, and we need not take up the story of exploration in these regions until 1725, when the Great Northern Expedition, conceived by Peter the Great and carried into execution by the Empress Anne, set forth under

the command of Vitus Bering, a Dane in the Russian service.

Immense difficulties had to be overcome before the expedition could start at all. Long overland journeys had to be made across Siberia, supplies had to be accumulated at Okhotsk and a vessel had to be built there, with the result that it was not until the end of June, 1727, that Spanberg, Bering's assistant, was able to sail for Bolsheretsk in the *Fortuna*. Here more supplies had to be accumulated and a second ship built, which involved a delay of yet another year. At last, however, on July 24, 1728, Bering sailed gaily down the Kamchatka River, in the *Gabriel*, on his voyage of exploration. The preparations had extended over more than three years, and the voyage occupied about seven weeks, during which no discoveries whatever were made, so that the game seems to have been hardly worth the rather expensive candle. During the following summer he sallied out of his harbour once more, but he does not seem to have prosecuted his work with very much ardour, for he returned at the end of three days, during which he had sailed about a hundred miles. He then made his way to St Petersburg.

The Empress Anne seems to have been easily pleased, for although Bering had been away for five years and had accomplished nothing whatever, she gave orders that a second and even larger expedition should be placed under his command. The preparations for this voyage occupied some seven years, but at last, in September 1740, Bering was ready to start, and before winter closed in upon him he suc-

ceeded in rounding Kamchatka and reaching Avatcha, now known as Petropaulovsk; not a very remarkable voyage, perhaps, but a step in the right direction. There he spent the winter, and in June of the following year he started out in the *St Peter*, accompanied by the *St Paul*, under the command of Tschirikoff. Even now, however, he could not succeed in overcoming his passion for dawdling, and much valuable time was wasted in searching for the land of Gama, which, in point of fact, did not exist. At last, however, the two ships set their course north-east, and a few days later they parted company during a heavy fog. Both of them succeeded in making America, a feat, however, which had already been accomplished by Gwosdef during Bering's absence at St Petersburg. Tschirikoff made the American coast on July 26, and after some exciting experiences, during which two parties who were sent ashore to explore were completely lost, he returned in safety to Petropaulovsk. Bering, who reached America three days later than his companion, was less fortunate. Caught by contrary winds and heavy gales, his vessel was ultimately stranded on Bering Island, where she broke up. Her commander, utterly disheartened, refused to eat or drink or to take shelter in the hut which had been constructed of drift-wood, with the result that he died on December 19. The command of the party now devolved on Lieutenant Waxell, who, ably assisted by a brilliant young naturalist, named Steller, succeeded in bringing the party safely out of its quandary. Their stay on the island, though it was miserable in the extreme, had its compensations, for they found that the place

abounded in the rare blue fox and the no less valuable sea-otter, of the skins of which the men secured such quantities that they took twenty thousand pounds' worth home to Russia.

Bering did not succeed in discovering either the sea or the strait which have been named after him, but he mapped out a large tract of the Asiatic coast with some accuracy and opened up a trade which proved to be of immense value.

Up to the middle of the second half of the eighteenth century the efforts of navigators had, for the most part, been directed to finding a passage to the Indies either by the north-western or by the north-eastern route. Robert Thorne, it is true, had come forward with a bold plan for attempting to sail across the North Pole, but he had not succeeded in getting very far on his way, and the idea had been allowed to lapse. In 1773, however, the Earl of Sandwich, then First Lord of the Admiralty, having been approached upon the subject by the Royal Society, suggested to George III. that an expedition should be sent out to discover how far it was possible to sail in the direction of the Pole. The King was pleased with the idea, and preparations for the venture were at once set on foot. The *Racehorse* and the *Carcase*, two of the strongest ships of the day, were selected as being best suited for the purpose, and were fitted out as the ideas of the time dictated. The command was entrusted to Captain Constantine John Phipps, afterwards the second Lord Mulgrave, Captain Skiffington Lutwidge was appointed second in command, two masters of Greenland ships were attached to the expedition as pilots, and an astronomer, with all

the latest instruments, was recommended by the Board of Longitude.

So far as actual achievements were concerned, there is nothing much to be recorded. Phipps was unfortunate in his year, and north of Spitzbergen he found a solid wall of ice which it was quite impossible for him to penetrate. He had the satisfaction, however, of reaching lat. $80^{\circ} 48$ N., a higher point than any of his predecessors. One episode deserves to be noticed as it came near causing the death of Nelson, who was serving in the humble capacity of captain's coxswain. "One night," says Southey, "during the mid-watch, he stole from the ship with one of his comrades, taking advantage of a rising fog, and set out over the ice in pursuit of a bear. It was not long before they were missed. The fog thickened, and Captain Lutwidge and his officers became exceedingly alarmed for his safety. Between three and four in the morning the weather cleared, and the two adventurers were seen, at a considerable distance from the ship, attacking a huge bear. The signal for them to return was immediately made; Nelson's comrade called upon him to obey it, but in vain. His musket had flashed in the pan, their ammunition was expended, and a chasm in the ice, which divided him from the bear, probably preserved his life. 'Never mind,' he cried, 'do but let me get a blow at the devil with the butt-end of my musket, and we shall have him.' Captain Lutwidge, however, seeing his danger, fired a gun, which had the desired effect of frightening the beast; and the boy then returned, somewhat afraid of the consequences of his trespass. The captain reprimanded him sternly



THE "RACEHORSE" AND THE "CARCASE" IN THE ICE

FROM A PICTURE BY J. CLIVELY

for conduct so unworthy of the office which he filled, and desired to know what motive he could have for hunting a bear. 'Sir,' said he, pouting his lip, as he was wont to do when agitated, 'I wished to kill the bear that I might carry the skin to my father.'"

It was three years after the return of the *Racehorse* and *Carcase* that Captain Cook made his only expedition into the Arctic seas. His success in the Antarctic had led his friends in England to hope great things of his voyage through the Bering Strait, but, unfortunately, his two ships, the *Resolution* and the *Discovery*, proved but ill-adapted for service in the Arctic, and though he succeeded in charting a good deal of the unknown American coast, he made no approach to finding that North-West Passage for the discovery of which he had been set out. He had intended to return to the Arctic again with a view to prosecuting his discoveries there, but his death at Hawaii in 1779 prevented him from fulfilling his purpose, and his second in command, Captain Clerke, on whom the leadership of the expedition devolved, died of consumption at Petropaulovsk.

CHAPTER III

THE VOYAGE OF BUCHAN AND FRANKLIN

WHAT with the American War and the Napoleonic Wars, our sailors had their hands so full at the end of the eighteenth and the beginning of the nineteenth centuries, that they had no time to spare for unnecessary exploration, and there is, in consequence, a hiatus of forty years in the story of Arctic discovery. In 1817, however, Captain William Scoresby, junior, one of the most famous of Scotch whalers, reported to Sir Joseph Banks that he had found nearly 2000 square leagues of the Spitzbergen Sea free from ice, and that he had, in consequence, been able to sight the eastern coast of Greenland, at a meridian usually considered inaccessible, adding that it would be greatly to the advantage of our whale fishery if expeditions were sent out to continue the work of exploration which had remained in abeyance for so long. Both Sir Joseph Banks and Sir John Barrow, then Secretary to the Admiralty, were much impressed by this report and it was through their representations that the Government decided to send out two expeditions in 1818, one of which was to make an effort to reach the Pole, while the other was to search for the elusive North-West Passage. The list of the officers of these two expeditions included six names which were des-

tined to become famous all over the world for their Arctic work—those of Back, Beechey, Franklin, Parry, John Ross, and James C. Ross.

The ships detailed for the first of these two expeditions were the *Dorothea* (370 tons) and the *Trent* (250 tons), two stout whalers which were specially strengthened for work in the ice with all the extra wood and iron that they could carry. They were provisioned for two years, and the leadership of the expedition was entrusted to Captain Buchan, who sailed on the *Dorothea*, while Franklin commanded the *Trent*, with Beechey as his lieutenant. The object of the mission was scientific as well as geographical, and it was hoped that many useful investigations would be made into the atmospheric, meteorological, and magnetic phenomena of the unknown region which it was to traverse.

The expedition sailed on April 25, the Arctic circle was crossed on May 18, and Bear Island sighted on the 24th. Standing north for the south cape of Spitzbergen, the ships met with their first serious opposition from the ice. They succeeded in making their way through the belt, however, and they were soon lying in Magdalena Bay. Further progress north was summarily checked by a vast field of ice through which it was impossible to penetrate, for the moment at any rate. Accordingly, Buchan decided to spend some time in exploring Magdalena Bay, in the hope that the conditions would change, and that he would be able to pass through it. His second venture, however, met with no better success. Indeed, disaster very nearly cut short the career of the two ships, for, while they were coasting along the pack, the breeze suddenly

dropped, and they were driven by the swell into the midst of the innumerable floes which were constantly being dashed by the rollers against the main sheet of ice. So fierce was the impact of these floes that they were crumbled to pieces, and for miles around the sea was covered with a thick pasty substance, known as brash ice, which often extended to a depth of five feet.

Fortunately, however, a breeze arose which carried them out of their dangerous predicament, and they were able to proceed on their way. Continuing their reconnaissance to the west, they found but little change in the condition of the pack, and they decided to desist for the present from their attempts to find a way through it. Accordingly they put about and made for Spitzbergen, where they found that the pack, though still impenetrable, had shifted a little, leaving a passage between it and the land. Rather unwisely, perhaps, Buchan attempted to make his way along this channel, and he had only just passed Red Cliff when the ice closed in upon him on every side, making it impossible for him either to advance or to retreat.

Here they remained for thirteen days with little to do except to observe the habits of the animals which appeared on all sides, and to indulge in a little hunting when the opportunity offered. In this connection Beechey tells a rather interesting story illustrating the ingenuity of the Polar bear. "Bears, when hungry," he writes, "seem always on the watch for animals sleeping on the ice, and endeavour by stratagem to approach them unobserved: for, on the smallest disturbance, the animals dart through holes in the ice, which they always take care to be near, and thus evade pursuit. One

sunshiny day a walrus, of nine or ten feet in length, rose in a pool of water not very far from us, and after looking round, drew his greasy carcase upon the ice, where he rolled about for a time, and at length laid himself down to sleep. A bear which had probably been observing his movements, crawled carefully upon the ice at the opposite side of the pool, and began to roll about also, but apparently more with design than amusement, as he progressively lessened the distance that intervened between him and his prey. The walrus, suspicious of his advances, drew himself up, preparatory to a precipitate retreat into the water, in case of a nearer acquaintance with his playful but treacherous visitor; on which the bear was instantly motionless as if in the act of sleep, but after a time began to lick his paws and clean himself, and occasionally to encroach a little more on his intended prey. But even this artifice did not succeed; the wary walrus was far too cunning to allow himself to be entrapped, and suddenly plunged in the pool." The bears, however, were not always so unlucky in their hunting, for in the stomach of one that they killed they found a Greenlander's garter.

Walrus hunting also afforded them a little sport, and on one occasion the crew were so unwise as to attack a herd in the ordinary ship's boats. Immediately the walruses rose on all sides, and it was no easy matter to prevent them from staving in the sides of the boats with their tusks, or dragging them under water. "It was the opinion of our people," says Beechey, "that in this assault the walruses were led by one animal in particular, a much larger and more formidable beast than any of the others; and they directed their efforts

more particularly towards him, but he withstood all the blows of their tomahawks without flinching, and his tough hide resisted the entry of the whale lances, which were, unfortunately, not very sharp, and soon bent double. The herd were so numerous, and their attacks so incessant, that there was not time to load a musket, which, indeed, was the only mode of seriously injuring them. The purser fortunately had his gun loaded, and the whole crew being now nearly exhausted with chopping and sticking at their assailants, he snatched it up, and thrusting the muzzle down the throat of the leader, fired into his body. The wound proved mortal, and the animal fell back amongst his companions, who immediately desisted from the attack, assembled round him, and in a moment quitted the boat, swimming away as hard as they could with their leader, whom they actually bore up with their tusks, and assiduously prevented from sinking."

The release which they had been praying for came at last, but it brought little improvement to their position, for a terrific gale arose which drove both the ships into the pack, with the result that half the timbers of the *Trent* were strained, while the *Dorothea* was reduced to something little better than a wreck. To attempt any further exploration was hopeless, so they made for Spitzbergen, where they found a safe anchorage in South Gat. Here the vessels were put into a state of repair, the officers in the meantime exploring the part of the island on which they found themselves, and making observations. On August 30 they put to sea once more, and arrived safely in England on October 22.

CHAPTER IV

ROSS'S FAILURES AND PARRY'S SUCCESSES

WHILE Buchan and Franklin were in difficulties in the ice off Spitzbergen, Ross and Parry with the *Isabella* (385 tons) and the *Alexander* (252 tons) were searching the shores of Baffin's Bay for the North-West Passage. They had set sail from Lerwick on May 3, and by the end of June they were past Disco Island. Here, through the medium of John Sackheuse, their invaluable interpreter, they opened up very friendly relations with the natives, in whose honour they gave a ball, which afforded immense entertainment to all concerned. After this, progress became slower, for the sea was cumbered with ice, and the crew were compelled to adopt the tedious expedient of "tracking" the ship through it, that is to say, of going ashore with a rope and dragging her through the obstruction. At the end of July, however, Ross succeeded in reaching Melville Bay, which proved to be one of the most important discoveries of the voyage, for the sea was full of whales, and has proved a lucrative hunting-ground for whalers ever since.

As they were nearing the northern shores of the Bay the voyage of the *Isabella* and the *Alexander* came near to being summarily ended by a terrific gale which drove the ice upon them in such quantities that they

were almost overwhelmed by it. Fortunately they both survived, and shortly after the storm had subsided, a number of natives with dog-sleighs were seen in the distance. All attempts at enticing them nearer by means of presents proved vain, but eventually the interpreter, Sackheuse, succeeded in getting into communication with them. At first they were inclined to distrust the strangers, imagining that the ships were some kind of weird animals with wings which had come either from the sun or the moon, they could not be sure which, with the express object of doing them an injury. The misunderstanding, however, was eventually cleared up, and they were induced to visit the ships, where everything that they saw was a source of infinite interest to them, with the exception of the ship's biscuit and salted meat, for which they expressed supreme disdain.

Pressing on north, the explorers found the sea fairly clear of ice, and they soon passed Cape Dudley Digges, Wolstenholme Island and Whale Sound, none of which had been visited since Baffin's day, and which cartographers had thought fit to erase from the maps, believing that Baffin had been the victim of hallucinations.

It was just after he had passed the Canary Islands that Ross made his first great mistake. It must be remembered in his extenuation that he was totally inexperienced in Arctic travel, and that he was unused to the strange atmospheric phenomena and illusions which meet the voyager in these regions at every turn. Even in the short period of his stay in the Polar seas, however, he ought to have learnt enough to prevent him

from being beguiled into the belief that Smith's Sound was nothing but a bay headed by a huge range of impenetrable mountains. That, however, was the conclusion to which he came, and he made no effort to push further north than the entrance to the Sound. Had he done so he would, of course, have found that his mountains were nothing but weather-gleam.

He now put about and pushed south, taking very accurate bearings of the various headlands which he passed. In the course of his voyage he came upon the entrances to Jones and Lancaster Sounds, both of which he was deterred from exploring by more ranges of impenetrable mountains, through which, however, his own lieutenant, Parry, sailed with perfect ease in the following year.

He reached Grimsby on November 14, meeting with no adventures worth recording on the way home. His voyage had two great results. It opened up an enormous and most lucrative whale fishery in and around Melville Bay, and it vindicated Baffin's position as an explorer. Otherwise it was a little disappointing, for if he had not been so obsessed with the idea that mountains hemmed him in on every side, he might have accomplished much more than he actually achieved.

In the narrative of his voyage, which he published after his return, Ross distinctly implies that his opinion as to the impossibility of finding a passage through any one of these three sounds was shared by the rest of his officers. This, however, appears to have been very far from the truth, as Parry's journals and letters attest. At the time when the two vessels were cruising

about in the mouth of Lancaster Sound they were some three miles apart, the *Isabella* being in advance. When the *Isabella* put about, the crew of the *Alexander* were positively amazed, for so far as they could discern, there was no land anywhere in sight.

The Admiralty seems to have had some inkling of the truth, for shortly after their return, Parry and Franklin were summoned into the presence of Lord Melville, and they gathered from the words that he let fall that he was of opinion that Lancaster Sound was a passage leading into some sea to the westward, an opinion which they heartily endorsed. The result was that, when it was decided to send out another expedition in the following spring, Parry was offered the command. This expedition was to consist of two ships, the *Hecla*, a bomb of 375 tons, and the *Griper*, a gunboat of 180 tons. Both of these ships were selected by Parry before he knew that he was to be placed in command, and it was under his supervision that they were put in thorough repair, and specially strengthened for work in the Arctic regions. Parry himself was to command the *Hecla*, while the *Griper* was to be entrusted to Lieutenant Liddon. The full complement of both ships was ninety-four, and the Admiralty had no difficulty in finding excellent seamen, for they offered double pay to all those who took part in the expedition. Captain Sabine, whose name subsequently became famous for his excellent scientific work, was appointed naturalist and astronomer, and among the officers were Lieutenants Beechey and Hoppner. The object of the mission, as stated in the Admiralty instructions, was to seek out a north-west passage from

the Atlantic to the Pacific either through Lancaster, Jones or Smith Sounds.

The ships weighed anchor on May 5, 1819, and at first progress was slow, for the *Griper* proved such a bad sailor that the *Hecla* had to take her in tow. On the 23rd they sighted the ice of Davis Strait, and for a while they were obliged to bear to the eastward of it owing to its thickness. On July 21, however, Parry was able to set his course westwards, and eight days later they sighted the mountains at the southern entrance of Lancaster Sound.

Parry unquestionably had excellent luck at this part of his voyage. A good easterly breeze sprang up and the ships bowled merrily along under all the sail that they could carry. The sea was practically open, no land could be seen ahead, and the shores of the sound were thirteen leagues apart. The one and only drawback was the poor sailing powers of the *Griper*.

At midnight on August 4 the sun being then, of course, as bright as at midday, they reached long. 90, and here they were pulled up by a barrier of ice that stretched from shore to shore. The part of the sound in which he now found himself Parry named Barrow Strait, while to two islands which lay ahead of him he gave the names of Leopold Islands, after Prince Leopold of Saxe-Coburg. To the westward of the islands he perceived a bright light in the sky which is known to Arctic sailors as "ice-blink" and which told him that there was no chance of a passage in that direction; to the south of him, however, there was a broad open space and over it was a dark water-sky, so he determined that,

as he could not push forward for the present, he would set his course southward.

The wind was favourable and the ships soon found themselves bowling along down an inlet at least ten leagues broad at the mouth, to which Parry subsequently gave the name of Prince Regent's Inlet. He explored this inlet for about 120 miles in the hope that he might find a passage leading westward but in this he was disappointed, and perceiving presently that icebergs covered the whole of the westerly horizon, he put about, and on the 13th was once more off Leopold Islands. The sea was still covered with ice, but in a few days this obstruction had cleared away completely and he was able to make his way along the coast of North Devon.

The question of the continuity of land to the north had for some time been worrying Parry, for there was a possibility that it might take a turn to the south and join the coast of America. Presently, however, his eyes were gladdened by the sight of a broad passage leading to the north through which he hoped that he would be able to sail if it proved impossible for him to make his way further westward, and to which he gave the name of Wellington Channel. There was no necessity, however, to explore it yet, for their way was still open before them, and they sailed merrily along passing and naming, of course, at the same time, Cornwallis, Griffith and Bathurst Islands. Towards the end of August, however, the sea began to fill with ice, and Parry saw that it was high time for him to begin to look for winter quarters. These he eventually found in Hecla and Griper Bay, on the coast of Melville Island,

and here the ships were made snug for the winter, though not until after the expedition had had the satisfaction of crossing the meridian 110° W., thus earning the reward of £5000 offered by the Government to the first British subject who should penetrate so far within the Arctic circle. They found that they were none too soon, for the bay, when they reached it, was already covered with a coating of ice, through which they had to carve a way for the ship with saws.

The work of putting the ships in order for the winter was instantly begun. The upper masts were dismantled, the lower yards were lashed fore and aft amidships and a roofing erected over the deck in order that the men might have a fairly warm house in which to take exercise when the rigours of the winter made it impossible for them to venture ashore. The question of how to provide his crew with that rational amusement which was absolutely necessary for them if they were to remain in good health next occupied Parry's attention. He was himself an excellent amateur actor, and as there were a couple of books of plays on board, he promptly founded the Royal Arctic Theatre. The scene-painting and rehearsals kept officers and men occupied for weeks, and on November 5, the theatrical season opened with a brilliant performance of "Miss in her 'teens," with Parry as Fribble, and Beechey as Miss Biddy.

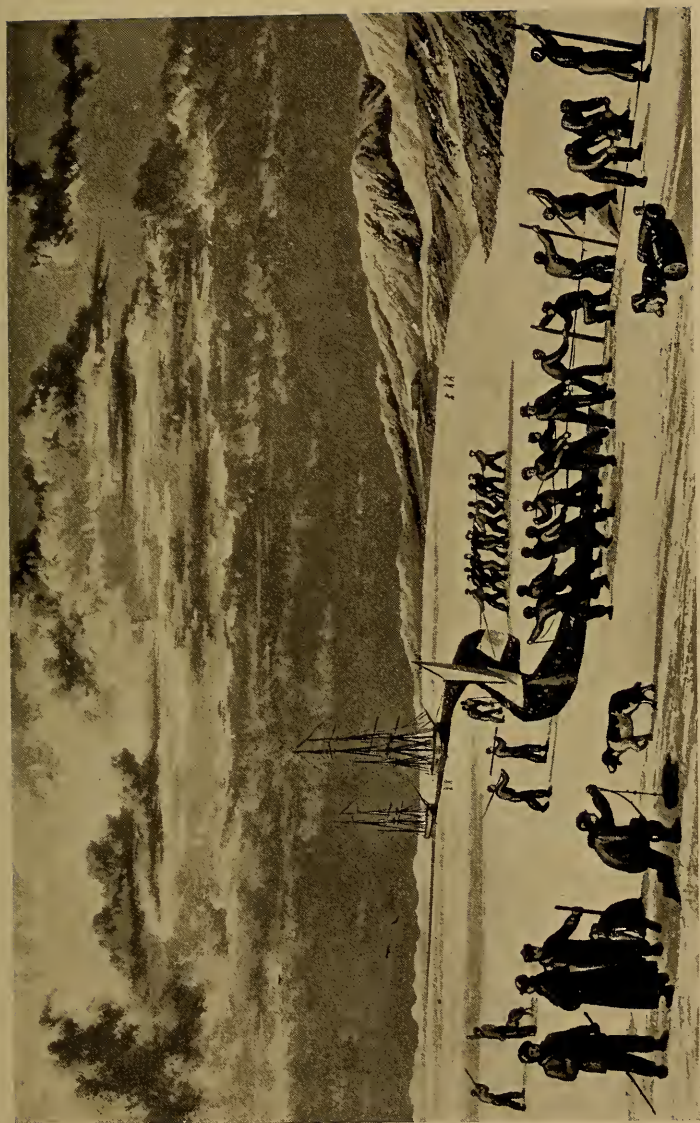
At the same time, Sabine founded a weekly paper entitled the *North Georgia Gazette and Winter Chronicle*, to which most of the officers became regular contributors. Parry suddenly displayed poetic gifts of which he had never before been suspected, Sabine showed a perfect

genius for dramatic criticism, while humorists galore sprang into being.

One or two extracts from the Gazette may here be quoted. In the issue of November 29, for example, we find an advertisement for "a middle-aged woman, not above thirty, of good character, to assist in DRESSING the LADIES at the THEATRE. Her salary will be handsome and she will be allowed tea and small beer into the bargain." This drew forth a reply from Mrs Abigail Handicraft, who wrote as follows: "I am a widow, twenty-six years of age, and can produce undeniable testimonials of my character and qualifications; but before I undertake the business of dressing the ladies at the theatre, I wish to be informed whether it is customary for them to keep on their breeches; also if I may be allowed two or three of the stoutest able-seamen or marines, to lace their stays." From the following issue we learn that Mrs Handicraft was duly engaged and that she was granted her two assistants who were to be equipped with "marline-spikes, levers, and white-line" for the reduction of Beechey's waist to more reasonable proportions.

The theatricals, though they provided great amusement for the crew, were often conducted under great difficulties, for the temperature on the stage sometimes sank below zero, and on one occasion Captain Lyon, when playing in "The Heir-at-Law" had to go through the last act with two of his fingers frost-bitten.

At the beginning of February the sun returned once more, but it brought with it very little improvement in the temperature, and the thermometer sometimes sank as low as 55° below zero. Several of the men



CUTTING A PASSAGE INTO WINTER HARBOUR
FROM A SKETCH BY LIEUT. BEECHY

were badly frost-bitten, notably Smith, Sabine's servant, who, in his anxiety to save the dipping needle from a fire which broke out in the observatory, ran out without putting on his gloves. As soon as he returned to the ship, the surgeon plunged his hands into a basin of icy water, the surface of which was immediately frozen by the cold thus communicated to it.

During the latter part of the winter some exceedingly beautiful atmospheric phenomena were seen. On March 4, for example, a halo appeared round the sun, consisting of a circle which glowed with prismatic colours. "Three parhelia, or mock suns, were distinctly seen upon this circle; the first being directly over the sun and one on each side of it, at its own altitude. The prismatic tints were much more brilliant in the parhelia than in any other part of the circle; but red, yellow and blue were the only colours which could be traced, the first of these being invariably next the sun in all the phenomena of this kind observed. From the sun itself, several rays of white light, continuous but not very brilliant, extended in various directions beyond the halo, and these rays were more bright after passing through the circle than within it. This singular phenomenon remained visible nearly two hours."

On March 19 the theatrical season came to an end with performances of "The Citizen" and "The Mayor of Garratt," in which Parry took the parts of old Philpot and Matthew Mug. The severest part of the winter was now over, but the ice showed as yet no signs of breaking up. Indeed, though a great deal of the snow melted during April and May, there seemed to be no

chance either of continuing the voyage or of returning to England. June passed, and brought no prospect of release, and Parry began to fear that he was doomed to spend another winter in the ice, an eventuality for which he was but ill prepared. Towards the end of July, however, the thaw began to have its effect upon the ice of the harbour, and on August 1 the two ships were able to weigh anchor and sail out of the bay.

They were not destined, however, to achieve much more. For several weeks they were checked by contrary winds and battered by the ice, till at last, on August 23, Parry decided that, as the season for navigation would be coming to an end in a fortnight, he had better return to England. This he accordingly proceeded to do, and the two ships reached Peterhead in safety on October 29.

CHAPTER V

FRANKLIN'S FIRST OVERLAND JOURNEY

IT is now necessary to return to Parry's friend and fellow explorer, John Franklin, who, it will be remembered, was summoned into Lord Melville's presence with Parry on November 18, 1818. The results of this interview were that while Parry was appointed to the command of the *Hecla* and *Griper*, Franklin was commissioned to undertake the no less important overland expedition to explore the shores of the North American continent from the mouth of the Coppermine River eastward.

The members of this expedition were five in number, and consisted of Franklin himself, Dr John Richardson, a surgeon in the navy, George Back, who had sailed as mate in the *Trent* with Franklin in 1818, Robert Hood, a midshipman, and John Hepburn, a sailor who was to act as servant. The object was to survey the coast carefully, to place conspicuous marks at the points at which ships might enter, and to deposit such information as to the nature of the coast as might be of service to Parry if he should actually succeed in finding a north-west passage. Franklin was also to conduct a series of scientific observations, making careful notes of the changes in the temperature, the state of the wind and weather, the dip and variation of the magnetic needle, and the intensity of the magnetic

force. In order that his chance of success might be as great as possible, he was provided with letters of recommendation from the Governors of the two great fur-trading companies of British North America—the Hudson's Bay Company and the North-West Company—in which the agents were ordered to do their utmost, by every means and in every way, to forward the interests of the expedition.

Franklin's first care on reaching Hudson's Bay was to proceed to York Factory, where he consulted a number of officials, among them being Mr Williams, the Governor of the Factory, as to the best way of reaching the mouth of the Coppermine, where, of course, the serious work of his expedition was to begin. They were decidedly of opinion that he should proceed to Cumberland House, and thence travel northwards along the chain of the Company's posts to the Great Slave Lake.

This route is practically a water-way, though the portages separating the various streams and lakes of which it is composed are almost numberless. Mr Williams, therefore, offered to provide the expedition with one of the Company's best boats, together with a large store of provisions and the other things necessary for the journey, an offer which, needless to say, was promptly accepted. Unfortunately, when these stores were brought down to the beach they were found to be of too great a bulk to be accommodated in the boat, so that a large portion of them, including the bacon and part of the rice, flour, ammunition, and tobacco, had to be left behind, the Governor promising to send them on during the next season.

They set out on September 9, and they found that, though their journey took them through very beautiful scenery, it was of the most arduous description. The rivers were narrow, winding, and full of rapids, while the current was frequently so swift that the use of sails or oars was out of the question, and the boat had to be towed, a method of progression which would have been pleasant enough had not the shores been lofty and rocky and intersected by ravines and tributary streams. In addition to this, there were the innumerable portages to be reckoned with, and their progress was in consequence slow in the extreme.

At last they reached Rock House, one of the posts of the Hudson's Bay Company, and there they were informed that still worse rapids lay before them, and that the boat must be lightened if they were to reach Cumberland House before the winter set in. Franklin was therefore obliged to leave still more of his cargo there, with orders for it to be forwarded by the Athabasca canoes as early in the following season as possible.

Proceeding on their way, they reached Cumberland House on October 23, and here they found the ice already forming on the lake, and learnt that it would be impossible for them to travel any further that season. Accordingly, when Governor Williams arrived a few days later and suggested that they should all winter at Cumberland House, they gladly fell in with the idea. On talking matters over, however, with the officers of the two great Companies, both of which had posts on the lake, Franklin came to the conclusion that by far his best plan would be to push on overland

during the winter into the Athabasca Department, where alone he could obtain the guides, hunters, and interpreters necessary for the success of his expedition. Accordingly, he requested Mr Williams to provide him with dogs, sledges, and drivers for the conveyance of himself and his two companions, Back and Hepburn. They started on January 18, 1820, and after a most unpleasant journey of 857 miles, in cold so intense that newly-made tea used to freeze in the tin pots before they had time to drink it, they reached Fort Chepewyan, on Athabasca Lake, on March 26. There Franklin spent several months, picking up such information as he could concerning the course of the Coppermine River and the coast about its mouth from the Indians and interpreters of the two Companies. The results of his investigations were fairly satisfactory, and he decided to send messages to the Companies' representatives on the Great Slave Lake, asking them to provide him with any knowledge that they could collect, and to engage a number of Copper Indians as guides and hunters.

On May 10 mosquitoes, these early harbingers of spring, put in an appearance, and Franklin realised that the time was approaching for him to make a move onwards. It was no easy matter, however, to obtain the stores and men that he needed. The provisions collected at the Fort were not much in excess of the actual needs of the inhabitants, while the employées of the Company were very unwilling to engage with his expedition except at an extortionate remuneration.

On July 13 Richardson and Hood arrived upon the scene, bringing with them all the provisions that they

had been able to collect at Cumberland House and Isle à la Crosse. These, however, did not amount to much as the Canadian voyagers belonging to the Hudson's Bay post had eaten all the pemmican intended for the explorers, while ten of the bags of provisions which they had secured at the latter post proved so mouldy that they had to be thrown away. Consequently the travellers were obliged to start out very badly equipped in the matter of supplies. There was, however, no possibility of delaying their departure, as Fort Chipewyan did not at the time afford sufficient means of subsistence for so large a party. Accordingly, the stores were distributed among the three canoes with which Franklin had been furnished, and on July 18 he set forth on his way with his party, which now consisted of four officers, sixteen Canadian voyagers, two interpreters, and the redoubtable Hepburn.

At the end of the month they reached Fort Providence, where they were met by Mr Wentzel, an agent of the North-West Company, who proposed to engage hunters for them, and who was himself to accompany them to the Coppermine River. Negotiations with a party of hunters under one Akaitcho, or Big Foot, were soon satisfactorily completed, and though the Indians were a little disappointed at learning that the great English medicine men were unable to bring certain dead members of their tribe to life again, a rumoured accomplishment of their new friends on which they had founded great hopes, they were soon won over by sundry cheap medals and other small presents, and promised to work heart and

soul for the good of the expedition. On August 2 the party set forth, now slightly augmented by an extra interpreter, Michel, an Iroquois, Mr Wentzel and the womankind of three of the voyagers who were to make shoes and clothes for the men while they were in winter quarters. On August 19 they reached the spot on which the Indians had settled as most suitable for the winter establishment.

There was now every sign that winter would be on them before long, so Franklin set his men to work on the building of the store house, and sent out his Indian hunters to obtain all the fresh meat that they could. The hunters, however, proved but broken reeds. During the expedition Akaitcho heard of the death of his brother-in-law, and his whole party was, apparently, so overcome by the sad news that they spent several days in wailing and lamentations, with the result they only succeeded in killing fifteen deer. Moreover, this family bereavement necessitated the removal of another portion of Akaitcho's tribe, which was to have stored up provisions on the bank of the Coppermine, to a place miles away from the proposed route.

To complete Franklin's discomfiture, Akaitcho absolutely refused to accompany him on a preliminary excursion to the Coppermine, saying that at that time of the year such a journey would be hazardous in the extreme. After painting its horrors and dangers in highly picturesque language, he further fulfilled his *rôle* of Job's comforter by saying that if Franklin were really bent upon the trip it was, of course, the duty of the Indians to render him all the help that they could. He would, therefore, allow some of the younger members

of his tribe to accompany him, adding that from the moment that they set forth he and his relatives would mourn them as dead. In spite of Akaitcho's pessimism, however, the expedition returned without losing a single one of its members, and the Indian's lamentations were entirely wasted.

By October 20 the house was completed and the party moved in. It was a log building, 50 feet long and 24 feet wide, consisting of a hall, three bedrooms, and a kitchen. It was not exactly impervious to the cold winds, for the clay with which the walls were daubed cracked as it was put on and admitted the air freely; compared with the tents, however, it was luxurious. The weather was now bitter, and hunting was over for the season. The store-house was fairly well stocked, while the carcasses of eighty deer were stowed away at various distances from the house *en cache*, that is to say, covered with heavy loads of wood and stones so that the wolves and wolverines could not get at them. Franklin, however, was growing very uneasy at the shortage of ammunition and tobacco. The former was, of course, absolutely necessary for the bare existence of the party, while the Canadians, who were great smokers, had stipulated for a liberal supply of the latter. The officials of the two companies, however, had not fulfilled their promises, and had failed to forward the stores with which they had pledged themselves to provide him. The only possible solution to the difficulty was to send some members of the party back for the supplies, and accordingly, on October 18, Back and Wentzel, with two Indians and two Canadians, set out on the long journey to Fort Providence.

The first detachment of this party returned on December 23, but the last did not put in an appearance till the middle of March, after travelling over 1000 miles on foot. Some idea of the difficulties which Back encountered may be gathered from the facts that he frequently passed two or three days without taking food, and that he was obliged to sleep in the woods with no other covering than a blanket and a deerskin, while the thermometer stood at 40° and once at 57° below zero. He had found that the supplies had not been forwarded simply through the gross neglect of some of the officials of the two trading companies. One of the Hudson's Bay officers, for example, being indisposed to burden his canoe with the stores which had been entrusted to his care, had incontinently heaped them up on the shore and left them there, quite regardless of the sufferings that this action was likely to bring upon the expedition. Eventually, however, sufficient supplies reached the party to place them beyond the danger of immediate want.

The chief work of the expedition was to begin in June, and on the 4th the first party, under Dr Richardson, sallied forth from Fort Enterprise, taking the land route northward. Ten days later a second party started with two canoes laid on trains, intending to strike the water at Winter Lake, which was not far distant. They were followed almost immediately by the third party, under Franklin, which brought with it the instruments, the remainder of the stores, and a small stock of dried meat. The fates seemed to be against the expedition from the very start, for when Franklin came up with the canoe party at Martin Lake, he found that the

hunters had only killed two deer, and that though these had been placed *en cache*, they had both been consumed by wolverines. Worse still, when he joined Richardson on the 21st he learned that Akaitcho and his son had expended all their ammunition and had nothing whatever to show for it. The doctor, assisted by his two hunters, had fortunately been able to secure and prepare 200 lbs. of dried meat, but this constituted practically all the stores they had for their long journey.

By July 12 they had reached the boundaries of the Eskimo territory, and the Indians, who were at constant war with these natives, refused point blank to go any further; so all that Franklin could do was to dismiss them, after extracting from them a solemn promise to lay in a good stock of provisions at Fort Enterprise against their return. A few hours later the sea was reached, and here Franklin parted with Wentzel and two of the Canadians, thus reducing his party to twenty men. His plan was to explore the coast as far east of the Coppermine as possible. If the conditions allowed he would return to the river; if not, he intended to strike north across a rocky desert known as the Barren Grounds, and to make for Fort Enterprise. Wentzel was requested to see that an ample supply of meat was provided at the fort for the party on its return.

The band of twenty now found themselves at the mouth of the Coppermine, 334 miles from their headquarters, with only sufficient provisions for fifteen days. On July 21 they launched their two frail canoes and set out upon the eastward voyage. It is scarcely necessary for us to concern ourselves with the details

of this trip. That it was dangerous goes without saying, for the thin sides of their vessels afforded but the most inadequate protection against the masses of ice which they were constantly encountering. For five weeks, however, they pressed onwards, taking observations and naming all the principal capes, islands, and bays for 650 miles along the coast. It was on August 16 when they had reached Point Turnagain, lat. $68^{\circ} 18'$ N. long. $109^{\circ} 25'$ W., that Franklin determined that it was time to put about. The open season was wearing on, the canoes were in a terrible state of disrepair, and the shortage of provisions was such as to cause serious anxiety. During the earlier part of the voyage the interpreters, St Germain and Adam, had been very successful with the gun, but their bags were growing smaller by degrees and beautifully less, the fact of the matter being, of course, that they had always regarded the expedition with strong disapproval and were anxious to compel it to return.

Consequently the canoes put about, and, after a most perilous journey, they entered Hood's River on August 25. The river, unfortunately, was too shallow and swift to allow them to proceed further by water, so Franklin took his canoes to pieces and constructed out of the materials two smaller canoes, each of them easily portable. By the last day of the month these preparations were completed, and the impedimenta, which consisted of ammunition, nets, hatchets, ice-chisels, astronomical instruments, three kettles, two canoes, and a tent, were divided up among the members of the party, each of whom had to carry a burden of about ninety pounds.

For the first few days of their journey they followed the course of the Hood, but soon the river curved westward and it was found necessary to strike inland across the desolate Barren Grounds, whose only recommendation was that they were comparatively flat, and that the heavily burdened party was spared the necessity of stumbling up hills and down valleys such as lined the course of the stream. Apart from this, the land over which they had to journey was as unattractive as could well be imagined. For miles and miles ahead and on either side of them stretched a vast, stony waste, on which not a trace of a living creature was to be seen. Of vegetation there was little or none, wood was conspicuous by its absence, and it was only on the rarest occasions that they were able to indulge in the luxury of a fire. The prospect was truly most uninviting.

They had only been a single day on their journey across this forbidding country when the terrible truth dawned upon them that the winter had set in unusually early, and that their dangers and sufferings were, in consequence, to be increased a hundredfold. The first news of this was brought to them by a terrible gale which arose in the night, and continued to blow with such violence that it was useless for them to attempt to fight against it, and they had no choice but to remain in their tents. For two days they lay in their blankets, shivering with the cold and with the pangs of hunger gnawing at them, for their provisions were now well nigh exhausted, and they had little left but some portable soup and arrowroot, which they were obliged to husband with the utmost care. By the morning of

the 7th the gale had abated but little, and the cold was still intense. However, they had to choose between two alternatives. Either they must push on in the teeth of the hurricane, or they must be frozen to death where they lay, and the former naturally seemed preferable. Heavily laden as they were, in the most favourable circumstances they could only march at the rate of a mile an hour, but now their progress was infinitely slower, for the ground was covered a foot deep with snow, and the marshes and swamps were crusted with a thin coating of ice which frequently gave way beneath them.

The storm was still raging so violently that the Canadians, who took it in turn to carry the boats, were often blown down, and the larger of the two boats was soon smashed to pieces. From what Franklin knew of the character of the voyagers he was inclined to believe that the accident was by no means a mere misadventure, but that the canoe had been broken purposely to save the labour of further transportation. However, he could only make the best of a bad business, so he built a fire of the fragments, and over it he cooked the last of his arrowroot and soup.

So for many tedious days they plodded wearily on, subsisting as best they could upon an occasional part-ridge and a species of edible lichen called *tripe de roche*, which grew upon the boulders—a poor sustenance for twenty starving men. The lichen, moreover, though it allayed the pangs of hunger for a while, was exceedingly bitter to the palate and positively noxious to several members of the hapless party.



CROSSING THE BARREN GROUNDS
FROM A DRAWING BY CAPT. BACK

Their physical sufferings grew more and more terrible every day. Hunger was not the only hardship with which they had to contend, for their course was constantly intersected by swamps through which they had to wade, and, as the thermometer was always below freezing point, their wet clothes were instantly frozen as stiff as boards, making walking more painful than ever. Once or twice they were fortunate enough to fall in with a herd of musk-oxen or a stray deer, but the supply was totally inadequate to the demand, and for the most part they were obliged to subsist on *tripe de roche*, which hardly a single member of the little band could now eat without becoming ill. On September 10 they came upon a large lake, and Franklin's drooping hopes were revived by the prospect of being able to supplement his provisions with a supply of fish. To his dismay, however, he now learnt that the Canadians, with criminal selfishness, had thrown away the nets and burnt the floats in order to decrease the burdens which they had to carry, an action which was all the more amazing seeing that, in their capacity of voyagers to the trading companies, they frequently found themselves in situations where they were obliged to depend on fishing for their means of subsistence.

These Canadians, however, with the exception of a man named Perrault, proved a terrible thorn in Franklin's side from the beginning to the end of the journey. They committed their crowning act of folly when they destroyed the second canoe, which, though very crazy, was the sole means of transport across the rivers and lakes. This loss was most seriously felt

when, a little later, the party came to the bank of the Coppermine and found themselves unable to reach the other side. Precious days were wasted in attempting to construct a raft or to find a ford, during which time they were obliged to live on the putrid carcass of a deer that had fallen into a cleft in a rock in the previous spring. Rafts and fords failing, Richardson made a gallant effort to swim the river with a line round his waist, and, in spite of the numbing cold of the water, he almost reached the other side. Then his strength failed him and he came within an ace of being drowned. He was dragged ashore just in time to save his life, but he felt the effects of his adventure till late in the following spring. At last, after repeated attempts, the whole party succeeded in crossing in a canoe made of the painted canvas in which they had wrapped their bedding, but the vessel was so frail that it could only carry one person at a time.

Back and three of the Canadians now went on ahead to search for the Indians and to see that everything was in readiness at the Fort. For another day the rest of the party struggled on, gaining what sustenance they could from the lichen and their old shoes. It soon became evident, however, that Hood and two of the Canadians, Credit and Vaillant, were growing so weak that they could march no further, and it was decided that the party must split up once more, and that the weaker members must remain behind with Richardson and Hepburn to attend to them, while Franklin and a few companions pushed on to the Fort. In the course of the following day a small thicket of willows was reached, and here it was decided to form the encamp-

ment. The Canadians, however, had not been able to struggle even that far, and had been left behind in the snow. "Some faint hopes were entertained of Credit's surviving the storm," says Franklin, "as he was provided with a good blanket and had some leather to eat."

Hardly had Franklin started on his way when three of his voyagers, Belanger, Perrault, and Fontano, and Michel, the Iroquois, broke down, and had to return to the encampment in the willows. With his four remaining comrades he marched doggedly on, and at last, to his inexpressible relief, his destination came in sight. But any hopes that he entertained of finding release from the sufferings of himself and his men, were destined to be dashed to the ground, for they stumbled into the Fort, only to find it cheerless and desolate, with no store of provisions and no indications as to the whereabouts of the Indians. Back had reached the Fort two days earlier, and had left a note to say that he had gone in search of Akaitcho and his dilatory hunters, but apart from this, there was no sign that the house had been entered since Franklin was last there.

Words cannot describe the bitter disappointment of these brave men, who, after their long and dogged fight against adversity, found themselves face to face with a death no less fearful than that which had threatened them on the Barren Grounds. With the exception of a few deerskins which had been thrown away as offal during their former residence at the Fort, there was nothing wherewith they could sustain life, while the winter storms had played such havoc with the walls and windows of the house that they let in the

bitter air freely, and the temperature of the living room ranged from 15° to 20° below zero.

There was nothing for them to do but to bear their sufferings as best as they could, and to await relief from the faithless Akaitcho and his hunters. That relief, however, was not destined to come yet, for two days later, they received a note from Back, telling them that he had been unable to find the Indians, and asking for further instructions. Weak though he was, Franklin now felt that the time had come for action, and he accordingly decided to set out himself for Fort Confidence, accompanied by two of his men, Augustus, an Eskimo interpreter, and Benoit, one of the voyagers. He had only been two days on his journey, however, when he had the misfortune to break one of his shoes, and was obliged to turn back to his comfortless hut, leaving his two companions to push on as best they could. It was, perhaps, as well that he did so, for, on reaching the Fort, he found that the two Canadians whom he had left behind were growing so weak that they had resigned themselves to what seemed to them the inevitable, and had lain down to die. Franklin's splendid example, however, infused fresh courage into them, and by dint of the utmost exertions they succeeded in keeping the life in their bodies, although they were now so feeble that when a herd of deer appeared within half a mile of them, they were quite unable to shoot them.

On the 29th, as they were crouching round a miserable fire, they were surprised to hear voices in the next room. Their first thought was that the Indians had at last come to their rescue. A moment later Richardson and Hepburn entered.

The arrival of these friends brought some fresh hope to the starving men at Fort Enterprise, for Hepburn was stronger than the rest, and there was every prospect that he would be able to find them some means of subsistence. But the sight of those two men standing there alone sent a chill to Franklin's heart. What, he asked, had become of Hood and Credit and Michel and Vaillant? The answer which he received on the following day was more terrible than his worst fears had led him to anticipate. Briefly put, Richardson's story ran thus.

On the morning of October 9, that is to say, two days after Franklin had started off for Fort Enterprise, Michel, the Iroquois, returned to the encampment alone, with the news that Belanger, with whom he had started, had left him on the way. There was every reason to suspect, however, both from the story that he told them, and from his subsequent behaviour, that he had made away with the Canadian, and that he had invented this tale to conceal the horrible sequel to his crime. From this time onward his conduct became more and more suspicious. He grew sullen and morose, he refused to go hunting, or, if he went, he would only go by himself, taking his hatchet with him, unlike a hunter, who only makes use of his knife when he kills deer. "This fact," says Richardson, "seems to indicate that he took it for the purpose of cutting up something that he knew to be frozen." At last, by a culminating act, he confirmed the suspicions which had already come to birth in the minds of Richardson and Hepburn, for, on Sunday, October 20, when left alone with Hood, he deliberately shot his companion through the head.

In their weak condition it was, of course, impossible for either the doctor or the sailor to wreak summary vengeance upon the murderer, although self-preservation demanded it. Accordingly, they buried Michel's victim, and on the 23rd this party of three—for none of the others had succeeded in reaching the camp—decided to set out for the Fort. It now became so painfully evident that the Iroquois intended his two companions to share the fate of his former victims, that there was only one course open to them. Accordingly, Richardson seized on an opportunity when Michel was not expecting an attack, to shoot him through the head with a pistol.

After six more days of indescribable sufferings they reached the fort, only, as we have seen, to find Franklin and the Canadians in no better a case than themselves. During the next few days the Canadians, Peltier and Samandré, succumbed, and their friends would inevitably have followed them before long had not help arrived on November 7. On that day three Indians, who had been found by Back, put in an appearance, and, though it was, of course, long before the sufferers recovered their health and strength, their troubles were practically at an end. They left Fort Enterprise on November 16, and, travelling by easy stages, they reached Moose Deer Island on December 18, where they were joined by Back, who had himself gone through a period of fearful hardship and privation during his search for succour.

In the summer of the following year Franklin returned to England, having accomplished a terrible journey of some 5500 miles. The result of his observations, of

course, added greatly to the world's store of knowledge of the then unknown regions of North America ; but he would have had a different tale to tell had not the rivalry between the two trading companies handicapped him from start to finish.

CHAPTER VI

PARRY'S LAST NORTH-WEST VOYAGES

WE must now return to Parry, who, it will be remembered, landed in England on October 1820, after making a number of most valuable discoveries in Lancaster Sound. The results of his voyage had been so encouraging that the Government determined to prepare another expedition for the following year. It was only natural to suppose, however, that any further attempts to find a North-West passage through Lancaster Sound would be rendered abortive by the ice, which seemed to form an absolutely impenetrable barrier across the westward entrance, and it was consequently decided to seek a passage by a more southerly route, in the hope that the climate would be more temperate and the ice less of an obstruction.

On the first expedition the *Hecla* had proved herself an excellent ship, but the *Griper*, owing to her poor sailing qualities, had been less of a success. Her place was taken, therefore, by the *Fury*, to which Parry himself was commissioned, while Captain George Francis Lyon, an officer of great ability, who was especially noted for the excellence of his drawings, was placed in command of the *Hecla*.

So popular was Parry that hardly had the news of his appointment been published than he was besieged by volunteers, among them being many members of his previous expedition. The latter included Lieutenants Hoppner, Mias, and Reid, James Clark Ross, a midshipman who had already had considerable experience of Arctic travel, and who was destined subsequently to win fame for himself by the discovery of the magnetic pole; and Mr Edwards, Parry's former surgeon. In all, the party consisted of 118 officers and men.

Parry set sail at the end of April with instructions to make direct for Hudson's Strait. Thence he was to sail westward until he should reach some part of the mainland of North America. On striking the coast he was to turn northward, and to examine every bay and inlet which might seem to afford a passage to the west, thus practically taking up the work of exploration where it had been dropped by Captain Middleton, who, in 1742, discovered Wager Inlet, and penetrated as far north as Cape Hope, near the entrance to Repulse Bay.

He reached Southampton Island on April 27, and after some delay occasioned by the ice, he succeeded in passing through Frozen Strait and making Repulse Bay. Up till that day the precise nature of the bay had never been determined, and it was believed by many to be in reality the entrance to a strait. Parry, however, soon discovered that it was actually a bay, and he accordingly turned northward in pursuit of his quest for a western passage. The coast along which he was now sailing was so broken that his progress

was necessarily slow, and when the beginning of October came he found himself no further north than the entrance to Lyon Inlet. The work that he did during those six weeks, however, though terribly tedious, was of immense value, for he mapped out every mile of a coast-line which had never been explored before.

It was now too late in the season for him to make much further progress that year, so he set sail to the south-east with a view to discovering comfortable winter quarters on the south side of Winter Island. On October 8, after a dangerous voyage through the ice, he found a bay which seemed admirably adapted for the purpose, and here, accordingly, he hove too and put everything ship-shape and in order for the long winter months.

Of the manner in which the crew beguiled their time it is unnecessary to speak at length. The theatrical performances, which had proved so successful on the previous voyage, were repeated, concerts were held, and everything possible was done to ward off that arch-enemy of the Arctic explorer, the scurvy. At the same time, of course, scientific observations were carried on without intermission.

At the beginning of February a party of Eskimos put in an appearance, and the explorers were astonished to find that a complete village had sprung up in their neighbourhood with a rapidity which is generally supposed to be the sole prerogative of castles in fairy stories. The explanation was that not a single material was employed in the construction of the huts except snow and ice. The natives proved exceptionally

friendly and rather less greedy than most of their race. As a rule the first Eskimo word that the uninitiated traveller is taught is "pilletay"—"give me"—which springs to a native's lips whenever his eyes light upon an object which he has not seen before.

The usual presentations of beads and nails formed a part of the introductory ceremonial. The recipients of these gifts were wont to display their gratitude in a manner that was not a little embarrassing, for when they were given anything they went off into fits of hysterical screaming or laughter, varied by the women with periods of weeping.

Apart from increasing their knowledge of the habits of the Eskimos, the explorers gained but little information that was of any value to them, and they learned nothing of that passage to the west for which they were seeking. One of the women was able to draw a rough map of the coast for some miles northward of Repulse Bay, and, in attempting to verify it, Captain Lyon very nearly lost his life in a snowstorm. Otherwise, however, the winter was marked by no event that need be recorded. On July 2, 1822, the two ships sailed out of their winter quarters and pursued their journey northward.

Occasionally the work of mapping out the coast, which, of course, occupied most of their attention, was varied by a little walrus-hunting, which proved to be excellent sport. Some idea of the strength of these creatures may be gathered from the fact that, in a big battue in which they indulged on July 15, one of the boats was seriously damaged by a walrus's tusks, while

another of the creatures, being accidentally touched by an oar, wrenched it out of the rower's hand with its flippers and broke it in two. The largest of the animals killed on that day weighed fifteen hundredweight and a half.

In such a way as this was the whole of the summer spent, and the arrival of winter found them as far as ever from the discovery of the North-West Passage. Parry spent the dark months off the Island of Igloolik, intending to continue his work during the following summer. An outbreak of scurvy, however, compelled him to change his plans, and, cutting short his voyage, to return to England, which he reached early in October.

In the following year Parry started out on his third and last search for the North-West Passage. The plan of the expedition was to explore Prince Regent's Inlet, but the ice was bad and the weather was unfavourable, with the result that he had barely reached the scene of his labours when winter set in. In the following year he was even more unfortunate, for the *Fury* was driven ashore in a gale and he was obliged to leave her to her fate, taking her men and such of her stores as he could find room for on board the *Hecla*. He had now no choice but to return home, as, with so many mouths to feed and so little to feed them with, he dared not risk another winter in the ice. It is worthy of mention, however, that the stores left behind on the ship and on the shore proved the salvation of several later expeditions.

By no means the least valuable of the pieces of information brought back by Parry was that, while



THE WALRUS AS SEEN BY OLAUS MAGNUS



the eastern coast of any land in the Arctic regions is almost invariably encumbered with heavy ice, the western coast is, in ordinary years, comparatively free—a discovery of which navigators have taken the fullest advantage ever since.

CHAPTER VII

FRANKLIN'S SECOND LAND JOURNEY

IN no way deterred by the terrible dangers which he had encountered in his first journey, Franklin had scarcely returned home when he laid before the Government a scheme for a second expedition which was, according to his idea, to proceed "overland to the mouth of the Mackenzie River and thence, by sea, to the north-western extremity of North America, with the combined object, also, of surveying the coast between the Mackenzie and Coppermine Rivers." It was hoped at the same time that, if Parry's party succeeded in winning through to the Polar Sea, the two expeditions might prove of mutual service to one another.

Franklin's plan found favour in the eyes of the Government, and he was immediately appointed to the command of the new expedition with authority to make such preparations as seemed proper to him. Warned by his previous experiences, he resolved to run no risks, and accordingly arranged a system of supplies which would remove all possibility of starvation, and superintended the construction of a number of boats which would be better able to withstand the arduous of navigation in the Polar Seas than the birch-bark canoes which he had previously employed.

The boats were four in number. Three of them varied

from twenty-four to twenty-six feet in length, while the fourth, which was called the *Walnut Shell*, was nine feet by four feet four and only weighed eighty-four pounds, being so constructed that it could be taken to pieces and made up into five or six parcels.

The party consisted of Franklin, Lieutenant Back, Dr Richardson (assistant-surveyor), and Mr Thomas Drummond (assistant-naturalist), with four mariners; and their plan of campaign was to be as follows: They were to sail to New York, and thence they were to make their way by a series of lakes and rivers to the Great Bear Lake, where they were to take up their quarters for the winter. As soon as the open season began they were to divide into two parties, one of which was to travel westward from the mouth of the Mackenzie, and, if possible, was to round Icy Cape and meet H.M.S. *Blossom* in Kotzebue's Inlet. The other was to turn eastward from the Mackenzie, and to explore the coast as far as the mouth of the Coppermine. Having reached that river, it was to return to the Great Bear Lake overland.

The first part of the journey was accomplished without misadventure, and on August 7, 1825, Franklin found himself at Fort Norman on the Mackenzie, near which point a tributary stream joins the river with the Great Bear Lake. The season was still so open that he decided to examine the river between Fort Norman and the sea before retiring into winter quarters, so he sent the main body of the expedition to the lake, with orders to erect the necessary buildings, while he and Mr Kendall set off downstream.

They raced along with the stream at a great pace,

and on August 16 they reached Ellice Island, lat. $69^{\circ} 14'$, long. $135^{\circ} 56'$. They were now on the very shore of the Polar Sea, and to their indescribable delight they found the ocean absolutely free from ice, and, to all appearances, perfectly navigable.

At this point a somewhat touching incident took place. In 1823 Franklin had married a Miss Eleanor Purdon, to whom he was absolutely devoted. While he was making the preparations for his journey his wife fell ill, and to while away the hours of her sickness she made him a small silken Union Jack which she gave him with injunctions never to unfurl it until he planted it on the shores of the Polar Sea. A few days after he set sail she died, and he received the news of his bereavement soon after he reached America. The story of the unfurling of her flag may be told in his own words:—

“The men,” he wrote, “had pitched the tent, and I caused the silk Union Jack to be hoisted, which my deeply lamented wife had made and presented to me as a parting gift, under the express condition that it was not to be unfurled before the expedition reached the Polar Sea. I will not attempt to describe my emotions as it expanded to the breeze—however natural, and, for the moment, irresistible, I felt that I had no right, by the indulgence of my own sorrows, to cloud the animated countenances of my companions. Joining, therefore, with the best grace that I could command in the general excitement, I endeavoured to return, with corresponding cheerfulness, their warm congratulations on having thus planted the British flag on this remote island of the Polar Sea.”

Extra grog was served out to the men, and Franklin and Kendall prepared to celebrate the event in a little brandy which they had reserved for the occasion. Unfortunately, however, the Canadian guide, Baptiste, had, in the excitement of the moment, provided them with salt water instead of fresh, and they had to use the brandy in the more classical form of a libation poured on the ground.

Franklin then erected a flag-staff, and deposited under it a letter containing information concerning the nearest station of the Hudson Bay Company for the use of Parry, in the event of his reaching the mouth of the Mackenzie. This done, he set out on the return journey to the Great Bear Lake, which he reached on September 4.

He found that the winter quarters had been completed during his absence, and that they had already been named Fort Franklin in his honour. The party had been increased to fifty by fresh arrivals, and, as they would have to depend largely upon fish for their food supply during the winter months, and it was useless to expect to catch sufficient for so many mouths at any one spot, two additional houses were erected, four and seven miles away. At the Fort itself fifteen to twenty nets were kept in constant use, and fish were so plentiful that the catches averaged from three hundred to eight hundred a day during the summer and winter.

Only once, towards the end of the winter, was the food supply in any danger of failing, and it was found necessary to put the party on short rations for a while. Fortunately, however, at the critical

moment the deer put in an appearance, and Franklin was relieved from all further anxiety. Otherwise the winter was quite uneventful, and the party lived together in complete harmony, which was not a little surprising considering that they consisted of such mixed nationalities as Englishmen, Highlanders, Canadians, Eskimos, Chipewyans, Dog-ribs, Hare Indians, and Crees.

It was on June 20 that the two parties set off from the Fort on their voyages of discovery. It had been arranged that Franklin and Back, with thirteen men and the Eskimo interpreter, Augustus, should man the *Lion* and the *Reliance*, and should explore the coast westwards, while Dr Richardson and Mr Kendall, with ten men, should survey the land between the Mackenzie and the Coppermine. They dropped down the river together till, on July 4, they parted company and started off on their respective ways.

On the 7th Franklin reached the mouth of the river, and there he came upon a party of Eskimos encamped upon an island, with whom he attempted to open negotiations. Things went very smoothly until the receding tide left the boats aground. Then, however, the Eskimos, having discovered that the boats had on board a store of wonderful goods, the like of which they had never set eyes on before, decided that it would be more to their advantage to lay hands on these at once than to await the possible advantages of future trade. Consequently, they began a spirited attack upon the boats which lasted for several hours, and during the course of which they possessed themselves of a considerable portion of the expedition's property. In

warding off the attack, Franklin and his men were at a serious disadvantage, for they knew perfectly well that if they used their fire-arms they would eventually pay the penalty with their lives. Fortunately, however, they were able to prevent the loss of any of their more valuable property, such as their sails, oars, and astronomical instruments, and early on the next morning they succeeded in getting the boats out into deep water again.

Having at last shaken off their unwelcome visitors, Franklin and his party continued their journey westward. On the following day they fell in with another party of Eskimos, who proved to be more friendly than the last, and provided Franklin with a quantity of information concerning the coast along which he was about to travel. In the main, they were discouraging, for they told him that, though in the immediate neighbourhood the ice might be expected to drift away from the shore if a southerly wind arose, further to the westward it frequently adhered to the land throughout the whole summer, and even if he were so fortunate as to find any channels, navigation could not be very safe, as the ice was continually tossing about. They expressed their surprise that the explorers had not brought with them dogs and sledges for use when the sea route proved impossible. In later years, of course, it was found that the plan suggested by the Eskimos was the only one by which any material advance could be made in the Polar regions.

Franklin, however, was not inclined to pin too much faith upon the Eskimos' information, as he learnt that, during the summer months, they never wandered far

from the Mackenzie, and could not, in consequence, know very much about the condition of the more westerly seas. So, a southerly wind springing up and carrying the ice away from the shore, he pressed forward with such speed as the somewhat variable conditions would allow. During the course of the next few days he discovered and named Points Sabine and King, Herschell Island, Canning River, and Flaxman's Island, and on August 10 he reached Foggy Island. On this unattractive spot the party was doomed to remain till the 16th, for a fog came down upon them and refused to clear away again. Fog, of course, is one of the most dangerous enemies of the Arctic navigator, for, when his course is obscured by it, he may be wrecked by an ice-floe before he is aware of his danger. Consequently there was nothing for them to do but to kick their heels on Foggy Island until more favourable weather allowed them to proceed.

This untimely delay deprived the expedition of all hope of success. Had they not lost those six valuable days they might very well have succeeded in joining the advance party sent out from H.M.S. *Blossom* in Kotzebue's Inlet. As it was, they had no choice but to turn back to the Great Bear Lake, which they reached on September 21.

On arriving at Fort Franklin they found that Dr Richardson, Mr Kendall and their party had already returned, having brought their expedition to a successful conclusion. They, too, had had some difficulties with the Eskimos, but, apart from this, they had met with no adventure worth recording. They had sailed

steadily along the coast, naming its principal features as they passed them. Liverpool Bay, Cape Bathurst, Franklin Bay, Cape Parry, Dolphin and Union Strait, and Cape Krusenstern, all owe their names to this expedition.

It was at the last of these, which is in lat. $68^{\circ} 23'$, long. $113^{\circ} 45'$ W., and stands at the western extremity of Coronation Gulf, that they connected the discoveries of the voyage with those made by Franklin on his former expedition. On the following day (August 8) they reached the mouth of the Coppermine, and there they found the remains of the fire which Franklin's previous expedition had made before setting out on its journey. The river was so shallow that it was impossible to navigate it in the boats that they were now using, so, after dragging them out of reach of any flood and stowing away any stores which they did not require in the tents, they began the return journey on foot. They reached Fort Franklin on August 18 "after an absence of seventy-one days, during which period we had travelled by land and water 1709 geographical or 1980 statute miles."

The winter passed without any particular incident, except some remarkably severe frosts. Some idea of the intense cold may be gathered from the fact that on January 24, 1827, when the temperature was at $52^{\circ} 2'$ below zero, Mr Kendall froze some mercury in the mould of a bullet and fired it from his pistol. This, however, was not the coldest weather that they experienced, for on February 7 the thermometer stood at 58° below zero.

During the summer of 1827 the party returned to England after an expedition which, if it had not absolutely fulfilled the purpose with which it had started, had certainly acquired some most valuable information.

CHAPTER VIII

PARRY'S NORTH-POLAR VOYAGE

IT is not necessary to concern ourselves much with Captain Lyon's subsidiary voyage of 1824. His instructions were to proceed to Repulse Bay in the *Hecla*, and to explore the isthmus which connects Melville Peninsula with the mainland and the coast beyond it. For reasons best known to himself, however, he tried to reach the bay by sailing round the south and up the west coasts of Southampton Island, instead of taking the shorter route along the north of the island, which Parry had always adopted. The result was that his expedition was very nearly lost, and he was obliged to return home before he had even reached the bay.

Nor is it necessary for us to follow Captain Beechey and the *Blossom* to Kotzebue Sound, where, it was hoped, they would meet Franklin and his party. He spent part of his time in cruising as far as Icy Cape, while the barge, which he sent forward under Mr Elson to search for Franklin and his party, explored the coast as far as Barrow Point—only 146 miles from Franklin's furthest point. Otherwise, however, nothing occurred that is worthy of note.

Passing over these, we now come to Parry's last

and, in some ways, his greatest voyage, a voyage which opened up a new epoch in Arctic exploration. He returned from his third journey in search of the North-West Passage in October 1825, and in the spring of 1826 he suggested to Lord Melville, then First Lord of the Admiralty, a plan for reaching the North Pole by means of sledge-boats, which should travel either over the ice or through any spaces of open water which might intervene. The idea, it should be said, had actually originated with Franklin, who had proposed the journey some years before, and had offered to take command of it himself. As, however, he was now away on his second journey through North America, Parry's services were retained for the expedition, which found complete favour in the eyes of the Admiralty. He was, in consequence, commissioned to the *Hecla* on November 11, 1826.

In order to make the objective of the journey perfectly clear, it will be best to quote a passage from the official instructions: "On your arrival at the northern shores of Spitzbergen," they ran, "you will fix upon some harbour or cove, in which the *Hecla* may be placed, and, having properly secured her, you are then to proceed with the boats, whose requirements have, under your own directions, been furnished expressly for the service, directly to the northward, and use your best endeavours to reach the North Pole; and, having made such observations as are specified in your instructions for your former voyages in the northern regions, and such as will be pointed out to you by the Council of the Royal Society, added to those which your own experience will suggest, you will

be careful to return to Spitzbergen before the winter sets in, and at such a period of the autumn as will ensure the vessels you command not being frozen up and thus obliged to winter there."

The sledge-boats alluded to were of a somewhat peculiar construction, and were, on the whole, very well adapted for the purpose for which they were intended. They were flat-bottomed, and measured 20 feet long and, at their greatest beam, 7 feet broad. On a frame of ash and hickory was stretched a sheet of mackintosh waterproofing coated with tar. Outside this were placed first a layer of thin fir planking, then a sheet of stout felt, and lastly a thin planking of oak. A strong runner shod with steel was attached on either side of the keel, while to the forepart of the runner was fixed a span of hide-rope to be used for dragging the boat over the ice. The equipment also included a light bamboo mast, 19 feet long, a tanned duck sail, which could also serve the purpose of an awning, a spreat, a boat-hook, fourteen paddles, and a steer-oar.

The expedition sailed on April 4, 1827, and on the 17th the *Hecla* was off Hammerfest, a port on the Island of Soroe, off the Lapland coast. Here she was to call for a number of tame reindeer which would, it was hoped, be useful for pulling the boats along the ice. As matters turned out, however, their services were not required. By the middle of May they had reached Spitzbergen, and a month was now spent in trying to find a suitable harbourage for the *Hecla*. Most of the bays that they passed were so encumbered with ice that it was quite impossible to reach them; but at last, on the north coast of West Spitzbergen, they came

upon a deep indentation named Treurenburg Bay, which suited their purpose admirably. Here, then, they made the *Hecla* fast and prepared to start on their journey towards the North Pole.

The boats were loaded with provisions for seventy-one days, and on the afternoon of June 21 they began their voyage. It had been decided to leave the reindeer behind as the ice, as seen from the crow's-nest, was so rough and hummocky that they could be of no use whatever. The weather was fine and clear, the boats proved to be thoroughly seaworthy, and in due time they passed Little Table Island, the last piece of land which they would see for some weeks.

So long as they were travelling over the open sea their progress was easy enough, and it was only when they reached the ice that their difficulties began. They had expected the first part of their trip to be arduous, and they were certainly not disappointed, for they found that their road lay over small, rugged floes of ice, separated from one another by pools of water. Each of these pools had to be crossed three or four times, as it was always necessary to unload the boats on taking them out of the water, and then, after dragging them with infinite labour through chasms and up and down great hummocks of ice, the men had to return to the point from which they set out for their clothes and food. Consequently their progress was exceedingly slow and tedious, and on the first day's journey they only made two and a half miles of nothing.

Parry had decided to travel entirely by night, and this for various reasons. There is, of course, no darkness at all during an Arctic summer, but the sun was

less powerful in the night, and the snow in consequence was firmer, while the glare, which by day was so strong as to produce inflammation of the eyes, was less oppressive. Furthermore, by sleeping during the warmer hours, it was possible for them to dry their working clothes, which were generally wet through from floundering about in pools of water.

They had hoped that when they were once through this preliminary field of broken ice they would reach a level sheet, over which they might travel with comparative ease, but, as time went on, the conditions seemed to become worse instead of better, for on the morning of the 26th rain began to fall heavily, with the result that the explorers were soon wet through, and nearly half the surface of the ice over which they had to travel was covered with little pools. From that time rain was almost constant, and Parry was the first to observe that the climate of these remoter Polar regions is actually milder than those of the northern shores of America, 7° to 15° further south.

The rain was often varied by fog, while, to add to the difficulties of the journey, they found that much of the surface ice over which they had to travel was composed of needle-like crystals, placed vertically, which, as the season advanced, afforded very poor foothold and cut their boots and feet.

One day was very like another on that most difficult journey. The party was usually aroused at about eight o'clock in the evening by a lusty tar blowing a reveille on a bugle. After prayers had been read, the men exchanged their fur sleeping suits for their walking clothes, which were, as a rule, still soaking wet or else

frozen solid. This done, they would breakfast on cocoa and biscuits, and, having loaded the sledges, they would set about the day's work. Their course underwent a good deal of variety, but it was never anything but arduous. Sometimes they had to haul the boat by main force over almost perpendicular blocks of ice. Sometimes they had to toil through snowy sludge, into which they sank so deeply that on one occasion it took them two hours to travel a hundred yards. Sometimes the pools and channels which separated the ice blocks from one another were not more than half a boat's length broad, and the provisions had to be ferried over on blocks of ice, a most anxious proceeding, seeing that if an accident had occurred the whole party would have been left to starve.

After anything between five and ten hours' work, during which they would make four or five miles, they would halt for the night, or, to speak more accurately, for the day, and, having changed into dry clothes, they would set about the necessary repairs, take supper, and retire to bed.

As they proceeded northward their progress seemed to become slower and slower. Parry had long since given up all hope of reaching the North Pole, but he had made up his mind, if possible, to touch the 83rd parallel, and thus to win the £1000 reward offered by the Government, but he was not prepared for the terrible disappointment with which he met at the end of July. On the 20th he ascertained by observation that his latitude was only $82^{\circ} 36'$, or less than five miles to the northward of his situation at noon on the 17th, although he was positive that they had travelled

at least twelve miles. During the next few days the result of the observations was always the same, and he invariably found himself several miles south of the point to which he believed the previous day's journey had brought him. He was therefore forced to the conclusion that the ice over which he was travelling was drifting steadily southward, and that he was losing during the day much of the ground that he had made during the night. So, after reaching lat. $82^{\circ} 45'$, a point which had never been attained before, and stood as a record for forty-five years, he decided to turn back. He was now only 172 miles from the *Hecla*, and of these 100 miles represented the journey over the water before reaching the ice. But as most of the 72 miles over the ice had been covered at least three, and sometimes five, times, the distance that they had travelled was about 580 geographical or 688 statute miles, almost exactly the distance from the *Hecla* to the Pole in a direct line.

The return journey was begun on July 27, and on August 21 they reached the *Hecla* without meeting with any contretemps. They set sail for home on August 28, and on September 29 Parry went to report himself at the Admiralty, where, curiously enough, he met Franklin, who had returned from his North American journey on exactly the same day.

Parry was received with enthusiasm wherever he went, and honours were showered on him in England and on the Continent. But from that point he leaves our narrative, for he never again sailed for the Polar seas.

CHAPTER IX

ROSS'S ADVENTURES IN THE "VICTORY"

THE idea of discovering a north-west passage, though temporarily eclipsed by Parry's great effort to reach the North Pole, was by no means set aside, and in 1828, soon after the return of the Polar Expedition, Captain John Ross approached the Government with a plan for the long-dreamt-of route through Prince Regent's Inlet. It will be remembered that Ross had had some previous experience of Arctic navigation, for in 1818 he had set out with the *Isabella* and *Alexander* on a voyage through Baffin's Bay, Parry being his second in command. On that occasion he distinguished himself by jumping to the conclusion that Lancaster Sound was a land-locked bay, and possibly on account of this error the Government did not see fit to entertain his new proposal.

Thanks, however, to the generosity of his friend Mr Felix Booth, he was able, in 1829, to buy and fit out a paddle steamer called the *Victory*, which had previously been used as a steam packet running between Liverpool and the Isle of Man.

In those days, of course, navigation by steam was in the very earliest stages of its development, and the experiment of sailing the Arctic seas in a boat propelled by the new motive power had yet to be

tried. The disadvantages of paddles in the ice were many and obvious, but they were minimised by an ingenious contrivance whereby the paddles could be lifted out of the water in a minute; while the *Victory* was also so fitted out that she could be used as a sailing vessel if necessary.

No sooner was the news of the preparation of the expedition made known, than Ross received offers of service from many experienced Arctic navigators, among them being Lieutenant Hoppner, Parry's former colleague, and Captain Back, Franklin's friend and companion. He had, however, already selected his nephew, Lieutenant James Clark Ross, as his second in command, and he could not, in consequence, accept their proposals.

The *Victory* set sail on May 23, 1829, and it was soon found to be fortunate that she had her sails to fall back upon, for the machinery, which was of the crudest description, was constantly getting out of working order, and, bit by bit, was ultimately rejected and thrown away.

Lancaster Sound was reached without any serious misadventure, and on August 10 the *Victory* rounded Cape York and entered Prince Regent's Inlet. Ross then headed for the western shore, and he was soon off the place where the *Fury* had been lost on Parry's previous expedition. The weather was bad, but he eventually succeeded in effecting a landing within a quarter of a mile of that ill-fated spot. Of the *Fury* herself no trace was to be seen, but the shore was strewn with coal, while in the officers' mess-hut, which Parry had erected before leaving, were quantities of

stores which proved of inestimable value to the present party of explorers. The bears had evidently been bestowing their attentions upon the contents of the storehouse, but they had been unable to make anything of the preserved meats and vegetables which, in spite of their four years' exposure to the weather, were in an excellent state of preservation.

The *Victory* had been originally provisioned for a thousand days, and as he had already drawn pretty freely upon his stores, Ross decided to make up the deficit from the hoard left by the *Fury*. They consequently took on board enough stores and provisions to complete their equipment for two years and three months, and set sail for the south.

On August 15 they passed Cape Garry, the furthest point of the coast yet discovered. From this point onwards, of course, they devoted themselves to mapping out and naming the principal features of the seaboard along which they sailed ; and in due course they reached what appeared to them to be a continuous stretch of land, which they named Boothia, in honour of Mr Felix Booth, who had equipped the expedition.

Whether it was ill luck, or whether it was a lack of perspicacity, it is difficult to say, but certain it is that Ross seemed always to be foredoomed just to miss the prize for which he was seeking. On his former voyage he mistook Lancaster Sound for an inlet, and, in consequence, the kudos which he might have gained from its discovery went to Parry instead. But on this occasion he was even more unfortunate, for, just before he reached Boothia, he passed Bellot Strait, which, as Kennedy subsequently discovered, leads directly into

the Arctic Sea, the very North-West Passage, in fact, for which he was looking. He again missed his chance, however, and, failing to recognise it as a strait, he named it Hazard Inlet and went on his way without the remotest idea of the discovery which he might have made had he taken the trouble to examine the inlet a little more closely.

Soon after this the *Victory* fell in with the ice and her voyage became one of the most hazardous description. Over and over again she seemed in imminent danger of being sunk, but she always managed to pull through, and eventually, on October 1, Ross found himself in a bay which seemed to be designed by nature for his winter quarters.

Here, accordingly, he decided to stay and his vessel was soon put ship-shape and in order for what ultimately proved to be the longest sojourn ever made by an explorer in the Arctic regions till then. It was not, indeed, until four winters had passed that the party was able to leave this dreary quarter of the world, and even then they were obliged to abandon their ship and take to the boats.

Very little that is worthy of note occurred during the first winter. The monotony of the excessively dull season was, however, relieved by the appearance of a party of Eskimos, who proved to be thoroughly friendly, except on one occasion when they nearly assassinated half the party because they imagined that they had caused the death of one of the members of their tribe by witchcraft. The white men, by the way, won their sinister reputation in a rather curious way. One of the Eskimos had had the misfortune to lose a leg

during an altercation with a bear. The ship's carpenter, seeing how severely handicapped the man was, thoughtfully provided him with a wooden leg, to the amazement and delight of himself and his fellows, who imagined that their new friends must be possessed of some very extraordinary powers to be able to provide the legless with fresh means of locomotion. One of them was so fascinated by the carpenter's ingenuity that, having done some slight damage to one of his own legs, he suggested that it would not be amiss if he were provided with a new one. On being informed, however, that it would be necessary to cut the other off first, he regarded the scheme with less enthusiasm.

With a view to obtaining from the Eskimos such geographical information as they might possess, Ross would frequently invite parties of them to dinner in his cabin. They did not, however, look upon English food with much favour. Salt meat, pudding, rice, or sweets they regarded with abhorrence, and the only articles of English diet that they would touch were soup and salmon, which they would wash down with beakers of oil, wine proving not at all to their tastes.

It was not until September 17 that the *Victory* was floating in open water again, but her release was destined to be short-lived, for after drifting about for a fortnight, the explorers found themselves frozen in again on September 30, only a few miles from the spot at which they had spent the previous winter.

For some months it had been pretty evident, from the variations of the compass and the dip of the magnetic needle, that they were very near that mysterious centre of terrestrial magnetism, the North Magnetic

Pole, and Ross came to the conclusion that his present enforced sojourn among the ice might be profitably employed in determining the point exactly. Accordingly, at the end of May 1831, the younger Ross set out with a party, armed with the instruments necessary for making the discovery which had occupied the thoughts of Parry on his earlier journey. They travelled westwards over the Boothia wilderness, and at eight o'clock on the morning of June 1 they realised that they had discovered the object of their search.

There was nothing in the place itself to distinguish it from the surrounding country, but the horizontal needles, which were suspended in the most delicate manner possible, remained absolutely inactive, while the amount of dip recorded by the dipping needle was $89^{\circ} 59'$, or within one minute of the vertical.

Having come definitely to the conclusion that he was actually standing on the Magnetic Pole, Ross hoisted the British flag and took possession of it and of its adjoining territory in the name of Great Britain and King William IV. He then raised a cairn of stones, in which he buried a canister containing a record of the discovery, and having determined the latitude to be $70^{\circ} 5' N.$, and the longitude $96^{\circ} 43' W.$, he set out on the return journey, which was accomplished without misadventure.

It had been hoped that the *Victory* would be able to sail for the open sea at the end of August, and by the 27th the bay was practically free of ice. But the travellers were once more doomed to disappointment, for adverse winds sprang up, and before she had

travelled many miles she was driven into a small bay into which she was promptly frozen.

By the middle of January 1832 it became perfectly obvious that if the members of the party were ever to return to England alive they must make a push for it; for scurvy broke out, and the health of his men became so enfeebled that they were faced by the unpleasant prospect of dying, one by one, in those inclement regions. Accordingly Ross determined to abandon the *Victory* and to take to the boats.

Experience, however, had taught him that it would be madness to hope to make any substantial progress in the very short time during which the sea in that neighbourhood appeared to be free from ice. So sledges were prepared, and the winter months were spent in dragging the boats over the ice in the direction of Fury Beach. The men were terribly reduced in strength by illness, and the hardships of their journey were appalling. However, it was their only chance of surviving, and they plodded steadily on. They left the *Victory* on May 29, and it was not until July 2 that they found themselves on Fury Beach, after an incredibly laborious journey which, in a direct line, was over three hundred miles, but which, in their case, was vastly lengthened by the fact that the combined strength of the whole party was often only sufficient to drag one boat at a time, and they were constantly obliged to cover each stretch of their journey two or three times.

On arriving at Fury Beach they built themselves a house, which they named Somerset House, and settled down to wait for the breaking up of the ice. Once

more, however, they were doomed to disappointment. At the beginning of August they set sail for the north, and the open sea, but they were almost immediately driven ashore again by the ice, and though they made one subsequent attempt to escape, they met with no better success.

There was nothing for it, therefore, but to make the best of a bad business, and to return to Somerset House for the winter. Mercifully there was still an abundance of the *Fury's* stores left, and they were, in consequence, in no danger of starving, but it may well be imagined that the disappointment was extreme, and that the prospect of being obliged to spend an Arctic winter in a cabin, that was but ill protected against the weather, was not enticing.

Their troubles, however, were approaching an end, for in the following summer the ice cleared away from the inlet, and the explorers were able to quit the country in which they had spent four tedious winters. Sailing on July 14 they were picked up on the 26th by a whaler which, curiously enough, Ross himself had once commanded—the *Isabella*, of Hull. It was only with some difficulty that they succeeded in persuading the mate of the boat which put out to meet them that they were not their own ghosts, for the party had long since been given up as lost. However, this difficulty having been satisfactorily overcome, they were taken on board, and they eventually arrived home in the middle of October.

Ross failed in the object of his voyage, partly, perhaps, through his own stupidity, for as we have already pointed out, he was at one time within an ace

of finding the North-West Passage. But his expedition had most valuable results, for not only did his nephew, James Clark Ross, locate the Magnetic Pole, but he also mapped out some six or seven hundred miles of coast line on either shore of Boothia and he made some exceedingly serviceable notes on the climatic conditions of North-Eastern America.

If he has never received full credit for his work, it is, perhaps, his own fault, for he made himself a most unpopular commander, and, if we may judge from the persistent pessimism of his diaries, he must have been a most depressing companion in the Arctic regions. Consequently most of the *kudos* has been given to his nephew, who was, no doubt, personally responsible for the discovery of the Magnetic Pole, but who, after all, was only a member of his uncle's expedition, and was acting entirely under his uncle's orders and directions.

CHAPTER X

BACK'S TWO JOURNEYS

THE prolonged absence of Ross and his party naturally gave their friends at home cause for the keenest anxiety. Many, believing it to be impossible for any Englishman to survive four consecutive winters in the inhospitable Arctic regions, gave them up for dead. There were others, however, who, knowing of the abundance of supplies on Fury Beach, entertained a hope that they might still be alive, and among these was Mr George Ross, a near relative of the commander of the *Victory*.

Mr Ross felt that, if it were possible to find a man who would be prepared to lead an expedition through Northern America, and thence to Fury Beach, the crew of the *Victory* might be rescued, or, at any rate, some definite information might be obtained concerning their fate. Such a man was forthcoming in Captain George Back, the companion of Franklin, both on the *Trent* and on his two land expeditions. It was in June 1832 that Back first heard of the projected expedition, and he promptly offered his services, which were as promptly accepted. So much interest did the Government take in the enterprise that they contributed largely towards its expenses, the rest of the necessary funds being easily obtained by public and private subscription.

In the meanwhile, the Hudson's Bay Company was not slow to display its sympathy. Its agents were informed that an expedition was likely to set out in the following spring, and were ordered to make the way easy for it, while two boats, two canoes and 120 bags of pemmican were placed at the disposal of Back, who was also empowered to levy contributions of provisions and stores at any of the Company's stations.

The plan of campaign was to be as follows. After spending the winter of 1833-34 at the Great Bear Lake, the expedition was to attempt the navigation of the great and hitherto unexplored river which had its source slightly to the east. This river was known to the Indians by the tongue-twisting name of Thlew-ee-chon-desseth, which, being translated, merely means the Great Fish River. Nothing definite was known concerning it, but it was believed to flow either into the eastern extremity of the Polar Sea or into Prince Regent's Inlet itself. Thence it would only be a matter of 300 miles to Fury Beach, where, it was well known, Ross intended to call for supplies. It will be seen that this expedition was to open up entirely new ground, and it was hoped that Back, who was to be accompanied by Mr Richard King, a naturalist of repute, and eighteen men, would make some valuable scientific discoveries.

The Great Slave Lake was reached without misadventure, and as the season was still early, Back determined to set out on a preliminary expedition in search of the source of the Great Fish River, which had never yet been properly located. He found that

his task was by no means light, for his way lay through a chain of rivers and lakes, involving countless portages, while, to add to his troubles, his interpreter fell ill and two of his Indian companions deserted. However, on August 31 he succeeded in reaching the river for which he was searching, and, though the season was now too late to admit of extended exploration, he was able to find out what build of boat would be necessary for the descent in the following year. This done, he made his way back to the spot on the Great Slave Lake which had been selected for the party's winter quarters.

Here he found that the construction of their quarters was proceeding apace. The framework of the house was already up, a fishery had been established which was yielding a plentiful supply of food, while Indians were already beginning to flock to Fort Reliance, as Back had named his winter quarters. The Indians of that country, it should be said, had an innate objection to being burdened with the sick and aged members of their tribe, and were in the habit of entrusting them to the care of the nearest white man, a species of dumping against which it was impossible to take any protective measures. Consequently Back soon found himself with a number of helpless dependants upon his hands, who were all the less welcome because the fishery, as time went on, did not prove an unalloyed success and the supply of food ran rather low.

The latter misfortune was attributed by the natives simply and solely to the evil machinations of a stone observatory which the explorers erected at the Fort. The use of the astronomical instruments which it con-

tained was totally beyond their comprehension, and in consequence they adopted what seemed to their untutored minds to be the only rational explanation, namely that they were in some way connected with witchcraft. This opinion was strengthened by the evidence of two Canadian voyagers, who, having chanced to peep into the observatory at the moment when Back and King were taking the dip of the magnetic needle, instantly told their companions that they had caught the white chief in the very act of raising the devil.

More than once during the winter the food supply was in danger of failing. The party, however, was preserved from starvation by Akaitcho, the old Coppermine chief, who put in a timely appearance with a supply of fresh meat. Still the distress at the Fort was often very serious, for not only was food scarce, but the winter was one of the coldest on record. The thermometer often stood at 70° below zero, while some idea of the difficulties attending ablution may be gathered from the fact that, on one occasion, when Back was obliged to wash his face at a distance of three feet from the fire, his hair was clothed with ice before he had time to dry it.

Towards the end of April a messenger arrived at the Fort with news that materially altered Back's plans, for he brought with him extracts from the *Times* which told of the safe return of Ross and his party. However, there was still his work of exploration to be carried out, so at the end of June he started off for the Great Fish River, whither carpenters had already been sent to build boats suitable for the voyage to the sea.

The descent of the river actually began on June 27,

and was one of the most exciting trips on record. The stream was constantly interrupted by rapids, falls, and rocks, and had not Back been provided with a bowman and a steersman of exceptional nerve and dexterity in Sinclair, a half-breed, and M'Kay, a Highlander, calamity would have overtaken his party before it was very far on its way.

A characteristic story is told of M'Kay which well deserves quotation. At a peculiarly crucial moment, when the boat was being swirled down one of the most dangerous rapids that the expedition had had to negotiate, an oar broke, and the boat and its occupants were within an ace of being hurled incontinently down an appalling fall. The situation proved altogether too much for one member of the crew, who began to cry aloud for Divine assistance. He was interrupted, however, by M'Kay, who yelled at him in a voice which carried even above the roar of the water, "Is this a time for praying? Pull your starboard oar!"

After a most perilous voyage, during which they covered 530 miles and negotiated no fewer than eighty-three falls, rapids, and cascades, Back and his party reached the mouth of the Great Fish River at the end of July. His hopes of being able to penetrate westward as far as Cape Turnagain were, however, doomed to disappointment, for the shore was so encumbered with ice that navigation was out of the question. After waiting for a few days in the hope that the sea would clear he determined to return home, so, after giving the name of King William Land to the big island which lay opposite the mouth of the river, he started on the homeward journey on

August 21, reaching his destination on September 17, and in the following year he returned to England. It should be added that, in honour of this voyage, the name of the river was changed to that of Back River.

Back was not destined to remain idle for long, for in 1836 he was despatched by the Government to find a passage from Prince Regent's Inlet into the Polar Sea, if such a passage existed. According to his instructions he was to make for Wager Inlet or Repulse Bay in the *Terror*, which had been specially fitted out for the voyage, and was manned by a splendid company, including Robert M'Clure, the future discoverer of the North-West Passage, and Graham Gore, one of Franklin's companions on his last and fatal expedition. There he was to spend the winter, and in the following year he was to cross the isthmus joining Melville Peninsula to the mainland and pursue his way towards Cape Turnagain.

Unfortunately he was not destined even to reach the scene of operations. Before she had made Southampton Island the *Terror* was caught in the pack, and all her captain's efforts to set her free again were unavailing. From this time onwards the situation of the crew was one of perpetual peril. Northerly winds swept the ice down upon her with terrific force, and, had she not been of an exceptionally strong build, she must have been crushed to pieces. As it was, her bolts started and her timbers cracked, till it was found necessary to hold her together with chains passed under her keel.

As the winter wore on matters became worse, for not only did the danger from the ice show no signs of diminishing, but scurvy broke out, and several men



THE DISRUPTION OF THE ICE ROUND THE "TERROR"

FROM A DRAWING BY CAPT. SMYTH

died of that terrible disease. For long and weary months the crew lived under the very shadow of death, and it was not until the beginning of May, by which time the *Terror* had drifted to the mouth of Hudson's Strait, that they dared to entertain any hopes of ultimate deliverance. At last, however, the ice broke away from the ship's sides, and she was afloat once more, but in so terribly crazy a condition that she was by no means fit for a voyage across the Atlantic. However chain cables were passed under her and made fast to ringbolts on the quarter deck, and, thus patched up, she accomplished the journey in safety, reaching British waters on September 3.

CHAPTER XI

THE DISCOVERIES OF DEASE AND SIMPSON

MEANWHILE the exploration of the shores of Northern America was proceeding apace. At the time when the *Terror* sailed for Hudson's Strait the situation was this. Beechey, starting from the west, had mapped out the coast as far as Point Barrow. No white man had yet examined the coast from Point Barrow to Return Reef, a matter of some 150 miles. The expeditions of Franklin and Richardson, however, had covered the whole distance between Return Reef and Point Turnagain, but the coast-line between that point and the mouth of the Great Fish or Back River still remained to be explored, as, too, did the shore of the Polar Sea eastward of the Great Fish River. It was to the last-named stretch of coast-line that the greatest importance was attached, because it was felt that search might very possibly reveal the existence of a waterway between Regent's Inlet and the Polar Sea. There being so much work to be done in this direction, in 1836 the Hudson's Bay Company determined to send out an expedition on its own account "to endeavour to complete the discovery and survey of the northern shores of the American continent." The command of the expedition was given to two of the Company's officers, Mr Peter

Warren Dease and Mr Thomas Simpson. Dease had accompanied Franklin on his expedition of 1825-26, and, on account of his seniority in the Company's service, the command of the party was given to him. Simpson was only a junior official, but he was a man of such immense enthusiasm and ability that, to all intents and purposes, before many weeks were over, he became the actual leader, and the most important discoveries made by the expedition must really be accredited to him.

According to the official instructions, the party, which was to consist of twelve men in addition to the two officers, was to proceed to the Athabasca Lake, and to winter either at Fort Chipewyan or at Fort Resolution. The summer of 1837 was to be devoted to the exploration of the coast-line between the mouth of the Mackenzie River, which would lead them to the sea, and Point Barrow. As soon as winter set in the party was to make its way to the Great Bear Lake, whence, in the summer of 1838, it was to pass down the Coppermine River, with a view to linking up Franklin's discoveries with those of Back.

In pursuance of this plan Dease set out for the Athabasca Lake at the end of July, while Simpson, who was a man of extraordinary energy, went south to the Red River Settlement, with a view to rubbing up his astronomy, entirely undeterred by the fact that he would have to make the whole of his journey to the Athabasca Lake—a distance of 1277 miles—on foot, in the depth of winter, over a rugged and trackless waste. It was to energy of this kind that

he owed so much of his success. Frequently during his subsequent trips he achieved feats which had hitherto been regarded as absolutely impossible, while he invariably travelled at a pace which none of his predecessors had ever approached. He covered the whole of the distance between the Red River Settlement and Lake Athabasca in sixty-two days; and what makes the achievement all the more remarkable is that he invariably insisted on "raising the road" himself—in other words, he marched on ahead of the party to mark out the track through the snow. This task is so exceedingly trying, that, as a rule, each member of a party undertakes it in turn for an hour at a time.

The winter at Fort Chipewyan was very largely occupied in the construction of the two boats that were to take the party down to the Polar Sea. The *Castor* and *Pollux*, as they were named, were light clinker-built craft of 24 feet keel and 6 feet beam, carrying two lug-sails apiece. They were duly launched at the end of May, and on June 1 the party set out on its way down to the sea. At Fort Norman four men were sent off to the Great Bear Lake to build winter quarters, establish a fishery, and make all the necessary preparations for the return of the party.

The voyage down the Mackenzie passed off without misadventure, and on July 9 the party found itself on the shores of the Polar Sea. The next fortnight was spent in verifying Franklin's discoveries, but on July 23 they reached Return Reef, and there they began to open up new country. Fog, ice, and adverse winds now made their progress rather slow, and Simpson

feared that if the conditions did not improve they would not reach Point Barrow before winter set in. Accordingly he determined to make a push for it, and selecting five men to accompany him, he started off to accomplish the rest of the journey on foot. The weather was bitterly cold, with a biting north-east wind and a thick fog. The coast, moreover, was intersected by countless salt creeks, through which it was necessary to wade, and the conditions altogether were as disagreeable as could well be imagined.

On the second day of the journey, however, when they had proceeded about thirty miles, they had the good fortune to come upon an Eskimo encampment. Here Simpson succeeded in borrowing an "oomiack," or large family canoe, which proved of such material assistance that before long they were at their journey's end.

The first part of their expedition was now safely accomplished, for they had surveyed the whole of the 150 miles of coast-line between Return Reef and Point Barrow, thus linking up the discoveries of Beechey and Franklin. There was, therefore, nothing left for them to do but to make the best of their way up the Mackenzie River to the Great Bear Lake, which they duly reached on September 25.

The winter passed without any misadventure whatever. The usual Indians, of course, swarmed to the Fort and expected to be fed by the Englishmen. Fortunately, however, provisions were plentiful, and the party, unlike some of the preceding expeditions, was never in danger of starvation, in spite of the enormous appetites in which most of its members

rejoiced. The intense cold of these climates makes a liberal supply of animal food absolutely indispensable, and the daily ration served out to each man was 10 or 12 pounds of venison, or, when they could be obtained, four or five whole fish weighing from 15 to 20 pounds. Even this was found insufficient by some members of the party.

As soon as summer began Simpson and his companions set out on their journey to the Coppermine River. Their way lay up Dease River and across the Dismal Lakes, and, as the ice had not yet given way to the thaw, the journey was attended by not a few difficulties. However, with characteristic enterprise, Simpson fixed his boats firmly on stout iron sledges, and having hoisted his sails sped away over the lakes at a good pace, to the immense astonishment of the natives.

On reaching the Coppermine they found it greatly swollen with the melting snow and strewn with loose ice. Delay, however, was intolerable to the explorers, and they determined to make the best of their way down to the sea without more ado. Navigation was extremely dangerous, for the river went raging down between gigantic precipices, along whose base the breakers raged and foamed with overwhelming fury. Simpson's account of the shooting of Escape Rapid, which they reached at noon on the first day of their journey, is well worth quoting as showing the sort of difficulties with which they had to contend: "A glance at the overhanging cliffs," he says, "told us that there was no alternative but to run down with a full cargo. In an instant we were in the vortex, and, before we were aware, my boat was borne towards an isolated

rock which the boiling surge almost concealed. To clear it on the outside was no longer possible; our only chance was to run between it and the lofty eastern cliff. The word was passed, and every breath was hushed. A stream which dashed down upon us over the brow of the precipice, more than a hundred feet in height, mingled with the spray that whirled upwards from the rapid, forming a terrific shower bath. The pass was about eight feet wide, and the error of a single foot would have been instant destruction. As, guided by Sinclair's consummate skill, the boat shot safely through those jaws of death, an involuntary cheer arose. Our next impulse was to turn round to view the fate of our comrades behind. They had profited by the peril we incurred and kept without the treacherous rock in time. The waves there were still higher, and for a while we lost sight of our friends. When they emerged the first object visible was the bowman disgorging part of an intrusive wave which he had swallowed and looking half-drowned. Mr Dease afterwards told me that the spray, which completely enveloped them, formed a gorgeous rainbow round the boat."

They reached the shores of the Polar Sea on July 1, and here they were doomed to disappointment. The winter had been one of exceptional length and severity, and in consequence the shores of the sea itself were so encumbered with ice as to make navigation almost impossible. They pushed slowly along, but they found both Coronation Gulf and Melville Sound completely covered with solid ice, and by August 19, when the time was rapidly approaching for them to return,

they were still three miles short of the furthest point reached by Franklin.

There was no chance of proceeding any further in their boats, but Simpson was determined to set foot on land which had never been trodden by an European, so with a party of seven men he set out on a ten days' tramp eastward. Travelling was very painful, for the way lay mostly over loose stones and was intersected by numberless brooks and streams. Their labours, however, were well rewarded. Simpson had feared from the formation of the land along which he was travelling that the coast-line of the Polar Sea was not continuous. On August 23, however, he reached a lofty cape, on ascending which he discovered that in reality he had merely been travelling along the southern shore of a strait. Beneath his feet lay an immense sea rolling away eastward as far as the eye could reach, while to the north he saw an extensive land to which he gave the name of Queen Victoria Land.

After travelling a few miles south-south-east the expedition was obliged to start on their way back, the five days allotted to the outgoing journey having now expired. On the 29th they rejoined the rest of the party at Boathaven, and on September 4 they began the journey up the Coppermine. Hitherto the ascent of the Coppermine by boat had been considered impossible. Simpson, however, determined to prove that the reverse was the case, and with infinite labour he succeeded in towing the boats safely up all the rapids. On September 5 they reached a spot about four miles below the junction of Kendal River, which they con-

sidered to be the nearest point to Fort Confidence. Here, accordingly, they dragged the boats out of the water, and leaving them high and dry in a wood, they made their way back to their winter quarters on foot, reaching their journey's end on September 14.

There everything had been got in perfect readiness for the long winter. The buildings had been put in order, a quantity of dried venison had been purchased from the Indians, and several thousand fish had been caught and cured. Consequently they were in no danger of want, and spent their time in comparative comfort until June brought a release from the frost. As soon as it was possible they set off for the point on the Coppermine at which they had left the *Castor* and *Pollux*, and in due time they reached the Polar Sea.

In the first week or so their progress was rather slow. The season was, however, far more open than was that of the preceding year and, on reaching Coronation Gulf, they found it, to their great delight, perfectly navigable. From that point they pushed on apace. On the night of the 20th they stopped at Boathaven, and thence, helped by a favouring wind, they ran rapidly along the west coast of Kent Peninsula to Cape Franklin, which they reached exactly a month earlier than Simpson's party had reached it in the preceding year. Here again they were favoured by fortune, for they found an open passage of water, two miles wide, along which the boats bowled merrily. They reached Cape Alexander on the 26th, and then, rounding the eastern extremity of Kent Peninsula, they ran along the shore which they had been previously obliged to

traverse on foot, discovering and naming Melbourne Island and Roxborough Cape as they went.

On the 10th they entered the strait which is now called by Simpson's name, and it was then that they realised that they were on the verge of linking up Franklin's discoveries with those of Back, for the rapid rush of the tide from the east told them that they were about to enter the open sea into which the Great Fish River disgorged its waters. On the 13th all doubts on this point were set at rest for, on rounding a very sharp cape, they saw before them a sandy desert which they knew to be Back's Ogle Point.

By reaching the estuary of the Great Fish River they had practically accomplished the objects of their expedition. Simpson, however, was by no means disposed to rest upon his laurels, and he determined to make an effort to discover whether or not the North American continent was linked to Boothia Felix or whether a strait connected the Boothia Gulf with the Arctic Sea. Accordingly, with his wonted energy, he selected three volunteers and set off on a short voyage of exploration in one of the boats. He was not destined, however, to succeed in his search, for on the 20th adverse winds compelled him to take shelter in a small river, which he named after the *Castor* and *Pollux*. To attempt to proceed any further would have been foolhardy, and might well have resulted in the loss of the entire party. Accordingly, having decided his position as lat. $68^{\circ} 28'$ N., long. $94^{\circ} 14'$ W., he turned back and reached Cape Britannia, where Dease had remained, on August 20.

They decided to vary their homeward journey by

sailing along the coast of Victoria Land, which had never, of course, been explored. They made its nearest point, which they named Cape Colborne, on September 6. The 7th and 8th were spent in sailing across two great bays, to which they gave the names of Cambridge and Wellington Bays, and on the 9th they were nearly opposite Cape Franklin, the shore of the American continent being then about twenty miles away. On the following day they made for Cape Barrow, having explored some 156 miles of the new country.

The ascent of the Coppermine was difficult, as winter had now set in, and the ice on the rocks afforded very poor foothold to the men who were towing the boats. The journey was, however, accomplished in safety, and on September 25 they reached Fort Confidence. Thence they passed on to Fort Simpson, where the leader of the expedition proposed to spend the next few weeks in writing up the account of his voyages and discoveries. These were completed by December 2, on which date he set out for his own station at Red River Settlement, which he reached on February 2, having travelled 1900 miles on foot in those sixty-one days.

This was destined to be the last journey which the indefatigable young traveller undertook, for within a few months he was lying in his grave. The exact circumstances which led to the tragic death of one of the most brilliant and enthusiastic explorers England ever possessed have never been properly ascertained, and no one ever knew whether he was murdered or whether he committed suicide.

Briefly put, the story is as follows: The Governor

of the Hudson's Bay Company at that time was a relation of the explorer, who was not, however, too well disposed towards him. Though the expedition had accomplished great things, it seems that Governor Simpson thought that it ought to have accomplished more ; and in one of his letters to its leader he expressed his regret that the party was not prepared to spend another year in the Arctic regions, with a view to pushing its discoveries on in the direction of Fury and Hecla Strait. As the younger Simpson had already told him in one of his letters that his men were utterly worn out and his provisions exhausted, the tone adopted by the Governor seems to have been distinctly unreasonable. That his relative was perfectly prepared to prosecute his researches still further was obvious from an offer which he made to lead another expedition north in the following year, with a view to surveying Boothia Felix, and, if possible, to passing through Fury and Hecla Strait, and so making his way to Hudson's Bay. This offer was, however, entirely ignored by Governor Simpson, who, indeed, gave the young explorer to understand that, if another expedition were fitted out, the command would be given to someone else.

Simpson was very much hurt by the Governor's attitude, and wrote him a somewhat strong letter upon the subject, with the result that he was ordered to repair to England immediately. The controversy seems to have affected the explorer's health very seriously indeed, and it is obvious from some of the letters that he wrote to the Governor that he was suffering from great mental excitement. Had he but known it, there was every prospect of his con-

tinuing his excellent work as an explorer, for a letter which he had written to the directors of the Hudson's Bay Company suggesting a fresh voyage of discovery through the Gulf of Boothia had been very favourably considered by them, and they wrote him a formal reply appointing him to the command of a fresh expedition within a few days of the date on which he set out on his homeward journey from the Red River Settlement.

He took leave of his friends on June 6, 1840, and started off in the direction of St Peters with a party which consisted of James Bruce of the Red River Settlement, a father and son of the name of Legros, and John Bird. Bruce's sworn testimony as to the events which took place on the journey is to the following effect. On June 14 Simpson seemed to be restless and ill. He frequently expressed a desire to return to the Red River Settlement, and urged the others to go with him. He did not appear to be suffering from any particular complaint, but he wished, nevertheless, to consult a physician, and told his companions that he feared that he could not live much longer. Towards the evening Bruce, Bird, and the elder Legros were engaged in pitching the tent, standing with their backs to their leader. Suddenly Bruce heard the report of a gun, and looking round, he saw that Simpson had shot Bird, who fell dead upon the spot. Simpson then turned his gun upon the elder Legros and fired at him, wounding him mortally, though death did not ensue immediately. When they were sufficiently recovered from their horror and amazement, Bruce and the younger Legros approached

Simpson, who told them that it had come to his knowledge that Bird and Legros had formed a plot to kill him during the night for his papers, and that he had only acted in self-defence. Before he died Legros denied the existence of any such plot, and to this day it is not known whether or not Simpson had any ground for his suspicions.

The young explorer was still standing with his gun in his hand, and Bruce and the younger Legros, fearing, apparently, that they might share the fate of their comrades, mounted their horses and rode back to find another and larger body of travellers whom they had left on the previous day, and who were encamped a few miles back. On reaching their friends they gave the alarm, and having been joined by five men they returned to the scene of the murders. As they reached the cart near which Simpson had been standing, they called him by name. The only answer that they received was the report of a gun and the whistle of a bullet. That Simpson had shot himself was the inevitable conclusion, but, with a view to frightening him if he should be still alive, they fired their guns as they approached the cart. The precaution was unnecessary, however, for, on drawing nearer, they found that Simpson had shot himself through the head. The bodies of the three men, Simpson, Legros, and Bird, were there and then buried in the same grave.

Such is the story as told by Bruce, but it is impossible to vouch for its truth as there was no corroborative evidence, the younger Legros never having been examined. Having regard to the state of Simpson's health at the time, it is more than probable

that he really believed that he was only acting in his own defence in shooting Bird and Legros. But whether he died by his own hand, or whether he was shot by Bruce or one of the party who returned with him, it is impossible to say.

CHAPTER XII

FRANKLIN'S LAST VOYAGE

THE failure of Back's expedition in the *Terror* to accomplish anything of importance proved so discouraging to the Government that, for a while, they desisted from any further attempts to discover the North-West Passage, and turned their attention to the Antarctic instead. The brilliant success of Dease and Simpson's journey along the shores of the Polar Sea, however, had the effect of giving a fresh impetus to the public interest in Arctic exploration; so, when the *Erebus* and *Terror* returned from their voyage to the Antarctic, the authorities listened favourably to the representations of the Royal Geographical Society and of a number of men of science who were interested in the work, and decided to fit them out again for an expedition to the Polar seas.

For the last seven years Franklin had been acting as Governor of Tasmania, but he returned at about the time when the new expedition was under discussion, and it was naturally felt that, as senior Arctic explorer, he ought to be given the command. Lord Haddington, then first Lord of the Admiralty, was at first rather chary of offering it to him, thinking that, after his long and brilliant career, he might well wish to spend the rest of his days in peace at home. "I might find a

good excuse for not letting you go, Sir John," he said, "in the rumour that tells me you are sixty years of age." "No, no, my lord," exclaimed Franklin, "I am only fifty-nine!" So to everyone's delight the appointment was duly made.

The *Erebus* and *Terror* were fitted out for the service with all the most modern appliances. Provided as they were with engines of twenty horse-power and auxiliary screws, they were the first Arctic vessels to put the discovery of steam to practical use, for the engines of the *Victory*, as we have seen, were so crude that they had to be discarded. Naturally enough the authorities were flooded with applications for appointments to the ships, and they were able, in consequence, to select some of the most able officers in the navy for the service, among them being Commander Fitzjames, who had been through the China War; Crozier and Graham Gore, who had served under Parry and Ross; Fairholme, Hodgson, and Des Vœux.

Franklin's official instructions were to pass through Lancaster Sound with all possible despatch, wasting no time in examining openings to the northward, and, after reaching Cape Walker, to turn southward and eastward with a view to finding his way to Behring Strait. Should neither of these two routes prove practicable, he was to go northward up Wellington Channel in the second summer.

The two ships sailed from the Thames on May 19, 1845, and were soon well on their way up Baffin Bay. Most of what we know of the early part of the voyage we owe to Commander Fitzjames, a delightful correspondent, who, in a series of letters to

Mrs Coningham, gave some character sketches of his companions which are well worth preserving. Here is a passage which refers to Franklin. "I like a man who is in earnest. Sir John Franklin read the church service to-day, and a sermon, so very beautifully that I defy any man not to feel the force of what he would convey. The first Sunday he read was a day or two before we sailed, when Lady Franklin, his daughter, and niece attended. Everyone was struck with his extreme earnestness of manner, evidently proceeding from real conviction. . . . We are very fond of Sir John Franklin, who improves very much as we come to know more of him. He is anything but nervous or fidgety; in fact, I should say remarkable for energetic decision in sudden emergencies, but I should think he might be easily persuaded where he has not already formed a strong opinion."

Here is a note on the purser. "I have just had a game of chess with the purser, Osmer, who is delightful. . . . I was at first inclined to think that he was a stupid old man, because he had a chin and took snuff; but he is as merry-hearted as any young man, full of quaint, dry sayings, always good-humoured, always laughing, never a bore, takes his pinch after dinner, plays a rubber, and beats me at chess—and he is a gentleman."

The subject of the next sketch to be quoted is Harry Goodsir, the assistant-surgeon of the *Erebus*, who, though still young, was already well known as a naturalist of more than ordinary ability. Before taking up his appointment to the expedition he had been curator of the Edinburgh museum. "I can't

make out," says Fitzjames, "why Scotchmen just caught always speak in a low, hesitating, monotonous tone of voice, which is not at all times to be understood ; this is, I believe, called 'cannyness.' Mr Good-sir is 'canny.' He is long and straight, and walks upright on his toes, with his hands tucked up in each jacket pocket. He is perfectly good-humoured, very well informed on general points, in natural history learned, was curator of the Edinburgh museum, appears to be about twenty-eight years of age, laughs delightfully, cannot be in a passion, is enthusiastic about all 'ologies, draws the insides of microscopic animals with an imaginary pointed pencil, catches phenomena in a bucket, looks at the thermometer and every other meter, is a pleasant companion and an acquisition to the mess."

Crouch, the mate, "is a little black-haired, smooth-faced fellow, good-humoured in his own way ; writes, reads, works, draws, all quietly ; is never in the way of anybody, and always ready when wanted ; but I can find no remarkable point in his character, except, perhaps, that he is, I should think, obstinate. Stanley, the surgeon, . . . is rather inclined to be good-looking, but fat, with jet-black hair, very white hands, which are always abominably clean, and the shirt sleeves tucked up, giving one unpleasant ideas that he would not mind cutting off one's leg immediately — if not sooner." Graham Gore, the first lieutenant, is "a man of great stability of character, a very good officer and the sweetest of tempers. He plays the flute dreadfully well, draws sometimes very well and sometimes very badly, but is altogether a capital fellow."

The expedition was probably the happiest and the most united that ever set out from England, and some of Sir John's kindly spirit seems to have been infused into all the members of the party. As an example of the good feeling which pervaded the whole crew, a little story concerning Osmer, the purser, may be quoted from Fitzjames's diary. It occurred when the ships were off the Danish settlement of Disco, a spot where the scenery is grand but unutterably bleak and desolate. Fitzjames happened to go on deck at midnight, and there he found Osmer indulging in a little *pas-seul*. "What a happy fellow you are!" exclaimed Fitzjames, "always in a good humour." "Well, sir," said the purser, "if I am not happy here, I don't know where else I could be."

The first few days of July were spent off Disco, taking in supplies and generally making the last preparations for the Arctic journey. At this time the prospects of success seemed to be unusually bright. The season at Disco was the mildest and earliest ever known, and, in their last letters home, the officers asked their relations, in jest, to address their future correspondence to Petropaulovski, a seaport beyond the Behring Strait, on the coast of Asiatic Russia.

There is a passage in one of these letters, written by Lieutenant Fairholme, which we cannot refrain from quoting, as it forms the last tribute to Franklin that was penned during his life. "On board," it runs, "we are as comfortable as it is possible to be. I need hardly tell you how much we are all delighted with our captain. He has, I am sure, won not only the respect, but the love of every person on board by his

amiable manner and kindness to all, and his influence is always employed for some good purpose, both among the officers and men. He has been most successful in his selection of officers, and a more agreeable set could hardly be found. Sir John is in much better health than when we left England, and really looks ten years younger. He takes an active part in everything that goes on, and his long experience in such services as this makes him a most valuable adviser."

On July 12 Franklin wrote his last official letter to the Admiralty. "The ships," he says, "are now complete with supplies of every kind for three years; they are, therefore, very deep; but happily we have no reason to expect much sea as we proceed farther. . . . It is unnecessary to assure their lordships of the energy and zeal of Captain Crozier, Commander Fitzjames, and the officers and men with whom I have the happiness of being employed on this service."

On the same day the *Erebus* and *Terror* sailed away north-west up the Waigat Strait. On the 26th they were sighted by the whaler *The Prince of Wales*, moored to an iceberg near the south entrance to Melville Bay, waiting for a favourable opportunity to round the middle ice and enter Lancaster Sound. The master of the whaler, Captain Dannett, was invited to dine with Sir John on the following day, but a favourable breeze sprang up, and the ships parted company. Captain Dannett was the last white man to set eyes on the ill-fated *Erebus* and *Terror*.

CHAPTER XIII

RAE AND THE BOOTHIA PENINSULA

IN order to preserve the chronological order of events, it is now necessary to leave the Franklin expedition for a while, and to take up the thread of the exploration of Northern America where it was dropped by Dease and Simpson. It will be remembered that shortly before his untimely death Simpson had written a letter to the Governors of the Hudson's Bay Company, suggesting that he should conduct an expedition along the undiscovered shores that lay between the Castor and Pollux River and Fury and Hecla Strait. Though he was destined never to know it, the plan was very favourably received by the directors, and their letter, conferring on him the sole command of the expedition, reached America very shortly after his death.

The immediate result of this sad event was that all plans for prosecuting the exploration of Northern America were held in abeyance for some years—till, indeed, 1845, when the news that England was fitting out a fresh expedition, with a view to discovering the North-West Passage, urged the Company on to further efforts. The command of the new expedition was offered by Sir George Simpson, who was still Governor-in-Chief of the Company's territories, to Dr John Rae, then new to Arctic exploration, though he subsequently

proved his worth, not only by the success which he achieved on the present journey, but also by the good work that he did in his search for Franklin.

The plan of campaign arranged by the Company differed materially from that originally propounded by Simpson. Simpson had proposed to travel eastward from the Castor and Pollux River and, after surveying Boothia Felix, to make his way, if possible, to Hudson's Bay. Rae's expedition, on the other hand, was to set out from Hudson's Bay and to make its way up Rowe's Welcome to Repulse Bay. There it was to cross the isthmus connecting the Melville Peninsula with the mainland, which, if the Eskimo stories were to be believed, was not more than three days' journey, and, on reaching the sea on the other side, it was to push on till it had reached the point where either Ross or Dease and Simpson had left off. It must be remembered that at this time it was not known whether Boothia Felix was an island or a peninsula. If it proved to be the former, Rae was to make his way through the passage that divided it from the mainland and so into the Arctic Ocean. If the latter, he was to travel up its western shores until he reached some point that had been visited by the Rosses in the *Victory*.

The journey was likely to prove adventurous, for there was no degree of certainty that the party would be able to obtain sufficient provisions to keep them from starving. Rae was only to take two small boats with him, so that it would be impossible for him to equip himself with any great quantity of food, and he would be obliged to depend on such poor supplies as

the barren country had to offer. As, therefore, it seemed more than probable that the party would have to face the unpleasing alternatives of being either starved or frozen to death, he had some difficulty at first in obtaining volunteers.

On June 1846, however, the preliminary difficulties having been overcome, Rae, with ten men, set out from York Factory. His boats, which were named the *North Pole* and the *Magnet*, were strong, clinker-built craft, 22 feet long by 7 feet 6 inches broad. In addition to the ordinary equipment, he carried an oiled canvas canoe and one of Halkett's air-boats which had never been tried on one of these expeditions before, and proved eminently satisfactory.

The first part of the journey was necessarily slow, as in many cases the sea was still blocked with closely-packed ice, which needed careful negotiation. On July 24, however, the boats rounded Cape Hope and entered Repulse Bay, where the original exploration was to begin. On landing in Gibson Cove, they came upon a party of Eskimos, from whom they learnt the good news that the isthmus was not more than forty miles across, and that over a full thirty-five miles of this distance a chain of lakes afforded a waterway.

On the following morning the ladies of the tribe paid Rae a state visit. "They were all tattooed on the face," he writes, "the form on each being nearly the same, viz. a number of curved lines drawn from between the eyebrows up over the forehead, two lines across the cheek from near the nose towards the ear, and a number of diverging curved lines from the lower lip towards the chin and lower jaw. Their hands and

arms were much tattooed from the tip of the finger to the shoulder. Their hair was collected in two large bunches, one on each side of the head, and, a piece of stick about ten inches long and half an inch thick being placed among it, a strip of different-coloured deer-skin is wound round it in a spiral form, producing far from an unpleasing effect. They all had ivory combs of their own manufacture, and deer-skin clothes with the hair outwards; the only difference between their dresses and those of the men being that the coats of the former had much larger hoods (which are used for carrying children), in having a flap before as well as behind, and also in the greater capacity of their boots, which come high above the knee, and are kept up by being fastened to the girdle." Curiously enough, one of these women had visited the *Fury* and *Hecla* twenty-three years before, and among her most prized possessions were some beads which Parry had given her.

With immense labour the boats were dragged up the stream which connects Repulse Bay with the chain of lakes, and the serious work of the expedition began. Rae found that he had not been misled by the stories of the Eskimos, and by August 1 he was on the shores of Committee Bay, the southernmost arm of Prince Regent Inlet. His first hope was that he would be able to sail round the bay and survey its shores. Ice and fog, however, rendered this quite impossible, so he decided, as there seemed to be no chance of the ice breaking up that season, to turn back to Repulse Bay and to hope for better luck in the following summer.

Game, fortunately, was plentiful at that time of the year, and the doctor, who was an enthusiastic sports-

man and an excellent shot, soon relieved his party of any dread that they might have of death from starvation. The sporting-book for September showed that 63 deer, 5 hares, 1 seal, 172 partridges, and 116 salmon and trout were brought into Fort Hope—the name given to their winter quarters—while in September he accounted for 69 deer. Fuel, however, was exceedingly scarce, and, as bitterly cold weather set in in the middle of October, the party was put to no small inconvenience. At first the frost was hailed as an unmixed blessing, for it hardened the wet clay with which the walls of the house had been dressed, and made the place weather-proof. Anything that was at all damp, however, was instantly frozen solid, and when Rae attempted to open some books which had been lying on a shelf, he found their leaves a solid mass. As fuel grew scarcer, the doctor forbade its use for any purpose except cooking, and a member of the party who wished to dry his wet clothes was obliged to take them to bed with him. The evaporation arising from them always froze on the blankets, which in consequence generally sparkled with hoar frost.

Almost the only form of exercise which the party was able to take was an occasional game of football on the snow. These games were not unattended by difficulties, for the snow was so hard that several pairs of heels were usually to be seen in the air at the same time, while the air was so bitter that the players were obliged to rub their faces continually in order to prevent them from being frost-bitten. A part of the time was also spent by the men in mastering the art of building snow houses after the Eskimo fashion, an

accomplishment which proved of inestimable service to them later on when they were engaged in the exploration of Boothia and Melville Peninsula.

At this time the Eskimos of the neighbourhood engaged a good deal of Rae's attention. They appear to have been an extraordinarily hardy race, who suffered no inconvenience even in the bitterest cold. On one occasion he found a member of the tribe engaged in repairing the runners of his sledge. "The substance used," he writes, "was a mixture of moss chopped up very fine, and snow soaked in water, lumps of which are firmly pressed on the sledge with the bare hand, and smoothed over so as to have an even surface. The process occupied the man nearly an hour, during the whole of which time he did not put his hands in his mits, nor did he appear to feel the cold much, although the temperature was 30° below zero." On another occasion he paid a visit to their camp, where he acquired the interesting intelligence that it was their custom to strip off all their clothes before retiring to bed even in the depth of winter. They kept their huts comparatively warm, however, by an ever-burning lamp, and Rae observed with some astonishment that, during the visit in question, his waistcoat thawed. That article of his attire had been frozen solid some time before by the congelation of his breath, and had had no opportunity of returning to its normal condition in his own comfortable quarters.

On April 5 Rae started off on his second journey across the isthmus which now bears his name, his object being to explore the western shores of Committee Bay and to discover whether any waterway led westward

from it to the Arctic seas. With the details of the journey we need scarcely concern ourselves, for it was not enlivened by any incident of special interest. It will be sufficient to say that his efforts were attended by complete success, for on April 18 he reached Lord Mayor's Bay, the most southern point reached by Ross, thus completing the discovery of the southern and western shores of Prince Regent's Inlet, and proving that Boothia was a peninsula.

Having duly taken possession of the newly-discovered country in the name of the Queen, he set out on the return journey to Fort Hope, which he reached on May 5. The eastern shores of Prince Regent Inlet still remained to be explored, and as the season was early, Rae decided to waste no time in setting about that part of his task. Accordingly he only rested at Fort Hope for a few days, and then, taking with him four men and a good supply of provisions, he set off again. By May 27 they were close to Cape Ellice, which is within ten miles or so of Fury and Hecla Strait. The journey, however, had been exceedingly exhausting and food was running short, so Rae decided that it would be madness to attempt to push his exploration any further. Accordingly the party turned homewards again and arrived at Fort Hope early in June, tired and very thin, but in excellent spirits. They finally reached York Factory on September 6, after a most successful journey, in the course of which they had discovered several hundred miles of unknown coast-line and had considerably reduced the area in which the North-West Passage must be sought.

CHAPTER XIV

THE FRANKLIN SEARCH BEGUN

IT was in the summer of 1847 that serious doubts concerning the safety of the Franklin expedition were first entertained and the Government decided to take steps towards its relief. As we have already seen, the *Erebus* and *Terror* were last sighted in Lancaster Sound, and there was no means of knowing in what direction they had sailed from that day onwards. Accordingly, it was thought best to send out relief parties from the east, through Lancaster Sound, from the west, through Behring Strait, and from the south, to search the northern shores to America.

The first of these to start was that which was to attempt to meet Franklin by way of Behring Strait. The *Herald* (Captain Kellett), a survey ship of 500 tons was already near the scene of action, and it was decided to reinforce her with the *Plover*, a store ship of 213 tons, under Commander Moore, and to send these two ships on a voyage round the North American coast to the Mackenzie River.

The *Plover* proved herself to be a very poor sailor, and it was not until June 1849 that the two ships met at their appointed rendezvous in Kotzebue Sound. Here they were joined by the *Nancy Dawson*, a small yacht owned and commanded by Mr Robert Sheddon, who had sailed north with a view to taking part in the

search. The three ships sailed north in company, and, on reaching Wainwright Inlet, despatched three boats, filled to the brim with provisions and commanded by Lieutenant Pullen, on the long journey to the Mackenzie River. Mr Sheddon determined to accompany Lieutenant Pullen for a part of his journey, but the *Herald* and *Plover* sailed on and explored the waters to the north of Behring Strait. Beyond discovering the two islands which now bear their names, however, they accomplished but little.

By September 2 the two government ships and the *Nancy Dawson* were all lying in Kotzebue Sound, where it had been decided that the *Plover* should spend the winter. After supplying the wants of her companion ship, the *Herald* sailed away south with the *Nancy Dawson*, reaching Mazatlan, on the coast of Mexico, at the beginning of October. Mr Sheddon, who had been in failing health for some time, did not survive the winter.

In the meanwhile, Moore, of the *Plover*, opened up communications with the natives round Kotzebue Sound in the hope that he might obtain tidings of Franklin. The result was that circumstantial tales concerning white men travelling in the interior, were poured into his ears, and, in attempting to verify these, Bedford Pim very nearly lost his life. Neither then, however, nor in the summer, when the *Herald* and *Plover* made a cruise round the coast, could they discover that these stories had any foundation in fact, nor did their search give them any reason to suppose that Franklin and his party had approached the shores along which they were sailing.

Lieutenant Pullen's boat expedition to the Mackenzie met with no better success. Cramped up in open boats which were in constant danger of being wrecked by gales or the drifting ice, he and his men suffered tortures from cold and exposure, and the difficulties and dangers of their 1500-mile journey were enhanced by the unfriendliness of the natives. The winter was spent at the various stations of the Hudson's Bay Company, and, in the following spring, Pullen set out again for the shores of the Polar Sea. The conditions, however, were such as to preclude any possibility of success, and he was obliged to turn back before he had even reached the point at which his search proper was to have begun.

The conduct of the first overland journey was entrusted to Richardson, who, with Rae as his lieutenant, was commissioned to search the coast of North America from the Mackenzie to the Coppermine. The Polar Sea was reached without misadventure, but from that point onwards the journey proved dangerous and difficult, as owing to the lateness of the spring they were obliged to cache their boats and make a great part of it on foot. In the following year Rae returned to the mouth of the Coppermine only to find that the natives had discovered the boats and had broken them up for the sake of the copper fastenings. Any sea voyage was, therefore, out of the question, and, after cross-examining the Eskimos and sweeping the shores of Wollaston Land with a telescope, he was obliged to return to headquarters at Fort Confidence.

The first two attempts at conducting the search through Lancaster Sound were not a conspicuous suc-

cess. Sir James Clark Ross started off in the *Enterprise* and *Investigator* and explored most of Prince Regent Inlet and the northern gulf of Boothia, but without obtaining any clues to Franklin's fate, while, in the following year, Saunders, who was sent out in the *North Star* with provisions for Ross, was caught in the ice and never succeeded in reaching his destination.

In 1851, however, the search was prosecuted with far greater vigour, and no fewer than five expeditions left British and American shores almost simultaneously. Of these, the Government sent out two, one consisting of four ships, the *Resolute* and the *Assistance*, with their steam tenders, the *Pioneer* and the *Intrepid*, commanded by Captain Horatio Austin, with Captain Ommaney, Lieutenant Osborn, and Lieutenant Cator under him, and the other of two whalers, the *Lady Franklin* and the *Sophia*, under William Penny, a whaler of great repute, who, it was hoped, would meet with rather more success in battling with the ice than did his predecessors, Ross and Saunders. Two private expeditions also set out from England, one of them, the *Prince Albert*, having been equipped by Lady Franklin, while the other, the *Felix*, was placed under the command of Ross. The American expedition consisted of the *Advance* and the *Rescue*, with Lieutenant De Haven at the head of affairs.

Unfortunately, all of these expeditions had one common objective—to pass up Lancaster Sound and examine the shores of Wellington Channel, the south-east entrance to which they reached almost simultaneously. It was now that the first traces of the missing explorers were found, for, going ashore on Beechey

Island on August 23, Ommaney discovered signs that a party of white men had encamped there, and Penny, examining the spot four days later, came upon the graves of four men belonging to the *Erebus* and *Terror*. In addition to the graves there was a hut, some pieces of rope of the pattern used in the Navy, and such miscellaneous odds and ends as torn mits, fragments of writing paper, meat-tins, and coal-bags, but, search as they would, they could find no sign of any written document such as might give some hint as to the direction which Franklin had taken on leaving his winter quarters. At Cape Riley again traces were found in abundance, but no information of any value was forthcoming.

Leaving his companions to follow up these discoveries, Forsyth instantly made his way back to England. De Haven also intended to return home, but the ice intervened, and the American ships were firmly beset before they had left Wellington Channel. From that time onwards their experiences were much like those of the *Terror*. Drifting northward with the ice, they were carried up to Grinnell Land, which had never been sighted before, and then, the drift changing to the south, they were borne down Wellington Channel along Lancaster Sound, and into Baffin Bay, till, after covering a distance of over a thousand miles in this fashion, they were finally released in July.

There was now nothing for the other three parties to do but to find winter quarters, whence they might prosecute the search as soon as spring made it possible for them to send out sledging parties. The *Lady Franklin*, the *Sophia*, and the *Felix*, therefore, put into

Assistance Bay, at the south end of Cornwallis Land, while Austin and his squadron made for Griffith Island, where they were frozen in in September.

It was Penny's special duty to explore the shores of Wellington Channel, and, as soon as the worst of the winter was over, he and Petersen started out with this end in view. As they pushed northward, they became more and more convinced that the channel led into a great open sea, and they had already determined to pursue their investigations further in this direction as soon as summer should have released the ships, when, to their amazement, on rounding a headland, they came upon a great channel of water, stretching away for at least twenty-five miles to the northward, and probably further. Racing back to the ship with all possible speed, they obtained a boat and succeeded in dragging it over the ice to the scene of their discovery. Unfortunately, however, contrary winds and drifting floes made it impossible to proceed any further, and they were obliged to turn back without exploring the waterway and its shores.

In the meanwhile Austin was pushing on his work with tremendous vigour, and to him and to his able junior officer, M'Clintock, must belong the credit of bringing the art of sledging to a higher pitch of perfection than had ever been attained before. The autumn was spent in establishing depots of provisions along the routes which were to be followed in the spring, and in examining the southern shores of Cornwallis Land in the hope that some traces of Franklin might be found there. It was in the middle of April that two great sledge parties started out under Ommaney and M'Clintock to



BOATS AMONG THE ICE
FROM A DRAWING BY CAPTAIN BACK

pursue the search to the south and east. Ommaney discovered and explored the northern shores of Prince of Wales' Land, which lay in the route where Franklin had been instructed to seek for the North-West Passage. He found, however, that the sea was so shallow and the ice so old that by no possibility could the *Erebus* and *Terror* have approached the shores. During his sixty days' absence from the ship he covered 480 miles and explored 205 miles of new coast. M'Clintock's objective was Melville Island, which had not been visited since Parry wintered there, but, though he covered 770 miles during his eighty-one days' absence, he found no trace of the explorers. Other parties sent out from the ships made important geographical discoveries, but, so far as the main object was concerned, their efforts were as fruitless as were those of the two big sledge expeditions.

As soon as the ice broke up, Penny approached Austin with a suggestion that one of his steam tenders should explore the northern half of Wellington Channel. Austin, however, did not think that any useful purpose would be served thereby, and, as he was not prepared to spend another winter in the ice the whole squadron returned home.

In the same summer the *Prince Albert*, which, it will be remembered, had sailed for home with tidings of the discovery of Franklin's first winter quarters, set out once more under the command of Captain Kennedy, with a French volunteer, Lieutenant J. R. Bellot, as second in command. It was while he was examining the northern shores of Prince Regent's Inlet that Kennedy's career was very nearly brought to an un-

timely close, for, with four companions, he became separated from the ships, and for a long time there seemed no prospect of his being able to rejoin her. Fortunately, he found that the stores which Ross had left at Somerset House in 1832 were in good condition, and there he and his companions remained for six weeks, at the end of which time Bellot succeeded in rescuing them. In the spring the two officers made a brilliant sledge journey, in the course of which they discovered that Brentford Bay was really a strait—which Kennedy promptly named after his companion—and travelled round the whole coast of North Somerset. In spite of their efforts, however, they did not light upon a single trace of Franklin and his men.

CHAPTER XV

THE VOYAGES OF COLLINSON AND M'CLURE

IT will be remembered that, in organising the Franklin search, the Government determined to send out expeditions from three points of the compass, east, west, and south. The first group was to follow in Franklin's tracks, the second was to attempt to meet him by way of Behring Strait, and the third was to search the North American coast in the hope that he might have found his way thither. As we have seen, the *Herald* and *Plover* had already been sent to Behring Strait, but the authorities felt that there was ample room for another expedition in that direction, so in 1849 they refitted the *Enterprise* and *Investigator*, and, putting them under the command of Captain Richard Collinson, C.B., and Captain J. Le Mesurier M'Clure, they despatched them on this hazardous service. Though Collinson was nominally leader of the expedition, M'Clure actually became its central figure, and it is with his doings that we shall have principally to deal.

M'Clure was a fine seaman and a man of indomitable courage, but, as we shall see presently, he possessed almost more than his fair share of that peculiarly British quality of never knowing when he was beaten, and he came near, in consequence, to sacrificing the lives of every member of his expedition.

The two ships set sail from the Thames on January 10, 1850, but early in February they parted company, and did not meet again till they reached Magellan Bay, though, curiously enough, they had crossed the line on the same day. On the evening of the day on which they left the Bay they were separated by a gale, never to meet again.

The *Investigator* was rather the better ship of the two, and she entered Behring Strait considerably in advance of her companion. Here M'Clure fell in first with the *Plover* under Commander Moore, by whom he sent a message home to England saying that he was making for Banks Land and was provisioned for three years, and later with the *Herald*. Kellett, who commanded the latter ship, told him that nothing had yet been heard of the *Enterprise*, and ordered him to await her arrival in accordance with his official instructions. This plan, however, by no means commended itself to M'Clure, so, signalling back "Important duty; cannot on my own responsibility," he sailed on his way. Kellett ought, no doubt, to have insisted on M'Clure obeying orders, but he was very awkwardly situated. He knew that the *Investigator* was on its way to succour Franklin, and that a winter's delay might ruin its chances of success, and, naturally enough, he did not like to incur the grave responsibility of stopping her in her work of humanity.

The main pack was sighted on August 2, but M'Clure was fortunate enough to find open water to the south of it, and he was soon round Point Barrow and sailing in waters which had never been travelled by a ship before. Navigation was very far

from easy, for the sea was covered with detached floes which, driven onward by the wind, came charging down upon the ship with tremendous force, setting her aquiver from stem to stern, and often endangering the safety of her masts.

Whenever it was possible M'Clure sent parties ashore to erect cairns and to open up communications with any natives that they might find. From these he gleaned one valuable piece of information, namely, that they had never before seen a "big oomiak" like the *Investigator*. The *Erebus* and *Terror*, therefore, could not have reached these shores.

After passing Return Reef navigation became more perilous than ever, owing to the innumerable shoals composed of driftwood and the deposits of the neighbouring rivers. On one occasion the *Investigator* went aground and lay for some time in imminent danger of being crushed to matchwood by the drifting floes. With all possible speed, a liberal supply of provisions was transferred to the boats, one of which unfortunately capsized and sixteen casks of salt meat went to the bottom. The loss was very severely felt later on.

Sailing with great care and circumspection, M'Clure succeeded in reaching Cape Parry. Here a southeasterly wind sprang up which cleared the sea of ice and gave him an open way to the north, of which he was not slow to take advantage. In a few hours the welcome cry of "land on the port bow" rang out, and Banks' Land came in sight. At first there was some doubt as to what this new land might be. Some thought that it was a continuation of Wollaston Land, others held that it was a part of

Banks' Land. In his uncertainty M'Clure gave it the name of Baring Island, but when, later on, it was found to be the southern extension of the land sighted by Parry from Melville Island in 1819-20, its original name was, of course, retained.

M'Clure's delight was completed when he found a perfectly open channel extending along the shores of the new land in a north-easterly direction. Up this channel he sailed, hardly daring to hope what was actually the truth, that this was the North-West Passage. His doubts were not, however, to be set at rest immediately, for thirty miles from the point at which the channel joins Barrow Strait his career was summarily checked by a barrier of ice which there was no penetrating, and all that he could do was to make up his mind to spend the winter where he was.

The early days of October brought with them the exceedingly unpleasant discovery that 500 lbs. of preserved meat were putrid and only fit to be thrown away. A little later, an examination of his stores showed him that another 424 lbs. were unfit for food, bringing the loss up to nearly a thousand pounds, in addition to the sixteen casks of salt meat which had fallen into the sea earlier in the voyage. The matter was especially serious as he had assured the Admiralty that he was fully provisioned for three years.

However, there was nothing for him to do but to make his crew forget the misfortune as quickly as possible, so he set about sending out expeditions along the shores of Prince of Wales' Strait, as he had named the channel which he had just discovered, and through Banks' Land. It was during one of these that he

actually discovered the North-West Passage and so earned the ten thousand pounds offered by the Government. This event took place on October 26th, when M'Clure, having ascended a high hill found that, as he had hoped, Prince Albert Land trended away to the eastward, while Banks' Land terminated in a low promontory about twelve miles from the point on which he stood. Away beyond the northern entrance to Prince of Wales' Strait he gazed across the frozen waters of Melville Sound, in which Barrow Strait terminates.

The dark days of winter passed away without misadventure, and, with the return of spring, M'Clure decided to send out sledge parties in search of Franklin. Few of those whose lot is cast in warmer climates can realise the dangers and discomforts of a long sledge journey in the Arctic regions. Sherard Osborn knew them well, and he gives so eloquent a description of them that we may quote it for the benefit of the uninitiated.

"If they should feel cold," he writes, "they must be patient, for until their return to the ship they will have no fire to warm them. Should their parched tongues cleave to their mouths, they must swallow snow to allay their thirst, for water there is none. Should their health fail, pity is all that their comrades can give them, for the sledge must move on its daily march. If hungry, they must console themselves by looking forward to being better fed when the travelling is over, for the rations are, necessarily, in sledge journeys, weighed off to an ounce. In short, from the time they leave the ship till their return to it, the service is ever

one of suffering and privation, which call for the utmost endurance and most zealous energy."

Three parties were sent out, which surveyed the coasts of Banks' Land and Prince Albert Land, but their labours were fated to be unrewarded, for not a trace of the missing expedition could they discover.

As soon as the thaw released him, M'Clure naturally made an effort to complete the North-West Passage. Ice and contrary winds, however, rendered it impossible for him to make his way through Prince of Wales' Strait, so he put about and determined to try to find a passage round the western coast of Banks' Land, and so into Melville Sound. At first all went well, but when he reached lat. $73^{\circ} 55'$, the highest point that he had yet attained, he was once more brought to a standstill. The channel of open water became narrower, the coast became more dangerous, and towering hills of ice hemmed them in on every side, threatening the ship with instant destruction.

At one time M'Clure feared that he would be obliged to spend the winter in this desolate situation, but fortunately a southerly wind arose which drove the ice off the shore and allowed him to proceed on his way. Weeks of valuable time had been wasted in the pack, and there was now nothing for him to do but to look for suitable winter quarters, which he eventually found in Mercy Bay.

Although, dreading lest his stay in the Arctic regions might be prolonged indefinitely, M'Clure found it necessary to put his men on rather short rations, the winter was passed comfortably enough, and, as soon as spring came round, he set out with seven men across the ice-

pack to Melville Island in the hope that he might find another of the search expeditions stationed there. To his intense disappointment, all that he discovered was M'Clintock's record of his visit of the previous year. Of ships or human beings there was not another trace. Fortunately for himself he left a notice there describing the position of the *Investigator* in Mercy Bay, and this ultimately proved his salvation.

When he returned to his ship he found that matters were not going too well with his men. They had, it is true, been fairly successful with their hunting, but scurvy had broken out and Dr Armstrong already had thirteen patients in his care. Worse, however, was to come, for July brought no sign of the desired thaw. Ice still choked the bay, thick ice covered the sound, and an ominous blink glowed in the sky. Early in September the frost once more had the bay in its grip and the unfortunate men realised that they were destined to spend a third winter in the ice.

M'Clure was now faced by a very difficult problem. In the first place, his pride and his sense of duty bade him to save his ship, which was still in perfect condition. In the second place, he felt that he could hardly ask his men to stay by him on the chance of release in the following summer. His solution of the problem cannot be regarded as entirely satisfactory. Calling his men on to the quarter deck one day in the early winter, he told them that he had decided that, as soon as spring came round, he would send away half of the crew in two divisions. One of these was to make for the mouth of Prince of Wales' Strait, where he had left a boat, and thence to the coast of America, while the

other was to march for Wellington Channel, where, he hoped, that they would be picked up by a whaler.

Armstrong knew that the men were quite unfit for such a journey, and told his commander so in no uncertain terms, but without producing the least effect. M'Clure was an incurable optimist and never could be induced to believe that his men were not capable of performing the impossible, so, with a view to ensuring a fairly adequate supply of provisions for the travelling parties, he cut down the rations once more. The result was that the whole crew lived in a state of perpetual hunger. The scurvy patients grew worse and those who had, up to the present, remained healthy, sickened rapidly. To add to their discomforts, the winter was one of the coldest on record, and on one occasion the thermometer registered ninety-nine degrees of frost.

Unfit though his men were for the service he contemplated for them, M'Clure set about making the final preparations for the expeditions. These were sufficiently extraordinary to startle even Dr Armstrong, accustomed as he was to his leader's vagaries, for M'Clure informed him one day that it was his intention to dispatch the weaker half of the crew from the vessel and bade him make the necessary selection. Armstrong could only do as he was told, and, with a sad heart, he picked out thirty of the most scorbutic members of the ship's company, and told them off into two divisions of fifteen each. As a final protest against what he evidently considered to be little short of murder, he and his assistant, Mr Piers, recorded in a letter their conviction that the men could not survive

such a journey. This, however, had as little effect as his earlier representations.

Early in April the gloom that had settled upon the ship was deepened by the first appearance of death, for one of the seamen, John Boyle, fell a victim to scurvy after only one day's illness. Fortunately, however, the clouds were soon to break, for, while M'Clure and Lieutenant Haswell were superintending the work of hewing a grave for Boyle out of the frozen earth, they were amazed to see a strange man coming towards them across the ice. So far as they could tell he was no member of their own crew, and their astonishment was increased when he began rushing across the ice, flinging up his arms and shouting wildly.

"In the name of God, who are you?" cried M'Clure, when he came within speaking distance.

"I'm Lieutenant Pim of the *Resolute*, now at Dealy Island," was the answer, "and I've come to relieve Captain M'Clure and the *Investigators*."

At first the men could not believe the evidence of their senses, but all doubts were set at rest when Pim's sledge, with the two men who had accompanied him, and a supply of provisions put in an appearance. It seemed that M'Clure's record at Winter Harbour had been found, and that Kellett, fearing that the *Investigator* might be still detained in the ice, had sent off Pim as soon as the conditions permitted, to bring its crew relief if they needed it. The journey had lasted a full month, and he only arrived just in time, for two or three days later the unfortunate sledge parties were to have started off on their terribly forlorn hope.

On April 8, M'Clure, accompanied by an officer and

six men, set out on the return journey to the *Resolute* leaving orders for the two sledge parties to follow him. By some unaccountable oversight, however, he omitted to put the men who remained behind on full rations, and two more lives were lost in consequence.

Even now M'Clure's excessive optimism had not deserted him, and, on reaching the *Resolute*, he told Kellett that the twenty men still on board the *Investigator* were quite well able to bring her home or to endure another winter in the ice if necessary. Kellett, however, had seen the condition of the men who composed the sledge-parties, and was altogether disinclined to agree with the gallant captain on this point. He accordingly arranged that his own surgeon, Dr Domville, should proceed to the *Investigator*, and, after joining Dr Armstrong in a medical survey of the crew, should make an unbiassed report thereon. There could only be one result. The two doctors found that none of the men were entirely free from scurvy, while many of them were very seriously ill. M'Clure, however, was by no means disposed to yield without a struggle. Accordingly he called the men on deck, and asked if any of them were prepared to volunteer for further service. Only four of them stood forward, so he had to yield to the inevitable.

The ship was cleaned and put in thorough order, and, after M'Clure had examined her for the last time, and had addressed a few words to the men, which according to Armstrong, were not particularly complimentary, the *Investigator* was abandoned on June 3. Lieutenant Cresswell and several members of the expedition joined the *North Star* at Beechey Island,

and were finally conveyed to England by H.M.S. *Phœnix* during the summer of 1853. Those who remained on board the *Resolute* and *Intrepid* were destined to spend yet another winter in the ice, but they eventually reached home in safety during the autumn of 1854. The ships themselves, however, had to be abandoned, the crews being taken on board the *North Star*, which was still in the neighbourhood.

It is worthy of mention that in May, 1854, a party was sent from the *Resolute* to report on the condition of the *Investigator* in Mercy Bay. It appeared, from the condition of the ice, that she had not been released during the summer, and that M'Clure and his men would have perished had they remained on board.

The expedition, though it resulted in the discovery of the North-West Passage, cannot be regarded as an entire success. It must be remembered that it was sent out to take part in the Franklin Search and not to add to the world's store of geographical knowledge. The coast of Bank's Land was examined, it is true, but had not M'Clure been so possessed of a desire to complete the passage himself, he would probably have accomplished a great deal more.

Collinson's voyage in the *Enterprise*, if less sensational than M'Clure's, was really far more remarkable, not only for the brilliant manner in which he conducted it, but also for the fact that, though he did not know it, he was the first of the search parties to approach the spot where the *Erebus* and *Terror* had been lost.

Passing Cape Lisburne a fortnight later than M'Clure, and not knowing whither the *Investigator* had gone, he examined the pack for a short distance and then sailed

south to Hong-Kong, where he spent the winter. As soon as the conditions permitted he returned to the scene of his labours and rounded Point Barrow on the last day of July. Entering Prince of Wales' Strait, he succeeded in following it almost to its mouth, but, as he had already learnt from a record left by M'Clure that his junior officer had discovered the North-West Passage, and that there was, in consequence, no object in his proceeding further in that direction, he turned south again and found winter quarters in Walker Bay.

Sledging expeditions were sent out during the autumn and spring to look for the *Investigators* and to try to discover traces of Franklin, but in neither object did they meet with any success. The *Enterprise* was released in August, 1852, and, having explored Prince Albert Sound, Collinson set his course eastward along the coast of America, and eventually reached the east end of Dease Strait, where he spent the next winter.

It was during a sledging expedition in the following spring that he came nearest to the discovery of the remains of the Franklin expedition, for on May 10 he stood on Gateshead Island and looked across the strait to King William Land, where lay the skeletons of the lost sailors. Had M'Clure only seen fit to remain with his leader more might have been accomplished, for it would have been possible to send out stronger sledging parties and to examine that part of the coast more thoroughly. Moreover, on board the *Investigator* was the only interpreter which the party possessed, and Collinson was, in consequence, unable to learn the

origin of an engine rod which he obtained from the natives. It is practically certain, of course, that this was a relic of one of the ill-fated ships, as also was a hatch-way which was found on Finlayson Island.

On being released from his winter quarters, Collinson turned westward again and spent his last winter in the Arctic regions off Flaxman's Island, whence he returned to England in the following year.

His voyage was unquestionably one of the most remarkable in the whole history of Arctic exploration. In a sailing ship of none too good a quality he succeeded in covering a distance within the Arctic circle which has only once been excelled, and that by a steamer, the *Vega*. He came within fifty-seven miles of completing the North-West Passage, the nearest approach on record; and of all the Government expeditions sent out he came nearest to bringing the Franklin search to a successful conclusion. His name ought to rank high in the annals of Arctic travel, and it is to be feared that he has never really received his just due.

CHAPTER XVI

BELCHER AND THE FRANKLIN SEARCH

WE now come to one of the strangest chapters in the whole history of the Franklin search. That Sir Edward Belcher's expedition, the last, and in every way the most complete equipped by the Government, was a fiasco it is quite impossible to deny. At the time public feeling ran very high about it, and Belcher became the object of much opprobrium, more, probably, than he actually deserved. The fact, however, that five valuable ships had been abandoned, apparently unnecessarily, that not a single trace of Franklin had been found, and that the search was given up, although its field had been so narrowed down that the direction which the missing expedition had taken was practically a matter of certainty, naturally rankled in the breasts of the British taxpayers. Belcher himself, too, added fuel to the fire by writing a singularly fatuous account of his travels which is largely composed of stories illustrative of his own preternatural sagacity.

We do not propose to dwell at very great length upon Belcher's monumental work, much of which, indeed, is absolutely unintelligible to the average mind; but it contains one or two gems which ought to be preserved.

He imagined himself to be the happy possessor, among other things, of a marvellous gift of prophecy, very nearly, as he naïvely remarks, approaching to sorcery. In support of this claim he mentions the following incident in his diary.

“To-day I felt so perfectly satisfied that a sledge was due from Kellett (if he existed), that I fully intended when the master reported noon, to desire him to send a person to look out on the hill. It escaped me, being then engaged on other matters; but my clerk coming in, reporting, ‘A dog sledge nearly alongside, sir!’ my reply, instigated by what was then passing in my mind, was very short, and without emotion, ‘I know it,’ which somewhat astonished him.” Parenthetically, we may remark that this is a very fair example of the author’s style as well as of his gift of prophecy.

Here, too, is a delicious passage which contains several bulls of the finest dimensions. “I ascended the hill, where I had ordered a cairn to be built; possibly it was deemed too steep for younger blood; we built three, *one was a house*, the two others were constructed by myself—the last being on the *inaccessible* summit of True Star Bluff—and unattended. I must say that I would not have *ordered it to be done by any but a volunteer.*” The italics are our own; the English, however, is entirely Sir Edward Belcher’s.

But we must return to the expedition itself, resisting the temptation to quote further examples of its leader’s unconscious humour. The Government was evidently disposed to leave no stone unturned to make it as complete as possible. The active work of the search

was to be pushed on from four ships, the *Assistance*, Commander G. H. Richards; the *Resolute*, Captain Henry Kellett; the *Pioneer*, Lieutenant Sherard Osborn; and the *Intrepid*, Commander F. L. M'Clintock. In addition to these, the expedition was provided with a depôt ship, the *North Star*, commanded by Lieutenant Pullen. The plan of campaign was to be as follows: On reaching the western end of Lancaster Sound the squadron was to divide into two parts. The *Assistance* and its tender, the *Pioneer*, were to devote their attention to Wellington Channel, while the *Resolute* with its tender, the *Intrepid*, was to visit Melville Island and explore the Parry Islands. For some reason known only to themselves, the Arctic committee had decided that it would be useless to pursue the search south of these regions.

The rendezvous at Beechey Island was reached without misadventure, and the two divisions immediately set off in their several directions, leaving the *North Star* behind. Kellett, with the *Resolute* and *Intrepid*, sailed direct for Winter Harbour, which he had intended to make his headquarters. He was disappointed, however, to find it entirely blocked with ice, and he was compelled, in consequence, to moor his ships in a bay between Dealy Island and the mainland, which was found to answer his purpose admirably. No sooner were the preparations for the winter completed than the work of sending out sledge parties began. He was fortunate in having several excellent officers under his command, among them being Lieutenants Mecham, Bedford Pim, and Hamilton, the mate, Mr Nares, who commanded the great Polar expedition of

1875, and De Bray, a French volunteer. The brief autumn days were spent not in the serious work of the search, but in forming depôts of provisions at points where it was thought that they would be most useful on the long spring journeys, and it was during one of these that Meham visited Winter Harbour and found the paper that M'Clure had left there during the spring of the same year, recording the detention of the *Investigator* in Mercy Bay and the discovery of the North-West Passage.

The winter passed uneventfully enough, but as soon as the first signs of the advent of spring appeared, the ship was alive with preparations for the sledge journeys. One of the first to be sent out was that which Lieutenant Bedford Pim conducted in search of the *Investigator*, but as we have already dealt with that, it is unnecessary to dwell upon it again here. Nor is there very much to be said concerning the parties led by M'Clintock of the *Intrepid*, and Meham and Hamilton of the *Resolute*. By exploring the Parry Islands thoroughly they added greatly to the world's store of knowledge concerning those regions, but one sledge journey in the Arctic regions bears a very strong family likeness to another, and these differed from their predecessors in no important essentials. Some idea of the vigour with which the work was pushed forward, however, may be gathered from the following figures. During the autumn and spring M'Clintock, the greatest of all Arctic sledgemen, covered 1661 miles in 145 days, Meham, 1375 miles in 117 days, Roche, 1039 miles in 79 days, Nares, 980 miles in 94 days, Domville, 739 miles in 77 days, and De Bray, 642 miles in 62 days.

Altogether, the various parties covered about 8558 miles, most of which had never been traversed by a white man before.

Early in August, 1853, the ice began to loosen, and Kellett, realising that nothing further could be done in these regions so far as the Franklin search was concerned, decided to sail for Beechey Island. He was not destined, however, to get very far, for on September 9th the ships were caught in the pack, and were soon so firmly embedded in it that there was no prospect whatever of escape during that season at any rate. The outlook, however, was not unpromising, for the ice, after drifting eastward for a while, soon became stationary, and Kellett found himself in a position which pointed to an early escape during the following summer. It was disappointing, of course, especially for those members of the *Investigator's* crew who were on board, but, as they had been so fortunate as to obtain an ample supply of game, there was no prospect of starvation.

Early in the spring of 1854 Kellett decided to send out three sledge parties, one under Krabbe, to report on the condition of the *Investigator*, another under Hamilton to open up communications with Sir Edward Belcher, and the third under Meham to explore Princess Royal Islands, in Prince of Wales' Strait. Of these three the last was by far the most remarkable. In the face of immense difficulties, Meham and his men made their way to Princess Royal Islands, and there they found records left by Captain Collinson of the *Enterprise*, which, it will be remembered started out with, but was soon separated from the *Investigator*.



FAST IN THE ICE

FROM A SKETCH BY LIEUT. BEECHEY

From these records they learnt that Collinson had passed up the strait as far as Point Peel, had turned back and had passed the winter of 1851-52 in lat. $71^{\circ} 36' N.$, long. $117^{\circ} 41' W.$ The records went on to say that the north and south shores of Prince Albert Land had been thoroughly explored, that several parties had visited Point Hearne, on Melville Island, and that the ship had left with a view to exploring a passage which, it was supposed, separated Prince Albert Land from Wollaston Land. Having obtained this intelligence, Meham resolved to return at once to the *Resolute*. On reaching Dealy Island, however, he found orders to make for Beechey Island, which he accordingly proceeded to do, arriving there on June 12, after an extraordinary journey of 70 days during which he and his men had covered 1336 miles.

It is now time to return to the fortunes of Sir Edward Belcher and the *Assistance*. It will be remembered that when Kellett sailed away westward, Belcher and his two ships turned northwards with the intention of exploring Wellington Channel. Fortune favoured them and they passed without difficulty first up Wellington and then through Queen's Channel to Northumberland Sound, on the west side of Grinnell Peninsula. Belcher soon found himself at the entrance to the Polar Sea, and his voyage resulted in the discovery of Belcher Channel, which links up Queen's Channel with Jones' Sound. He did not push his explorations very far, however, for, having received dispatches telling him of the rescue of the *Investigators*, he suddenly turned back presumably with the intention of intercepting Kellett

at Beechey Island. He did not succeed in reaching his proposed destination, for, when about fifty miles from the mouth of Wellington Channel the *Assistance* was caught in the ice.

Early in September Sherard Osborn set out with dispatches for Beechey Island. On his return he brought news of the arrival of H.M.S. *Phœnix*, commanded by Captain Inglefield, and of the sad death of Lieutenant Bellot who had volunteered for service on the *Phœnix*, which was sent out with supplementary stores for the *North Star*. Bellot, it appeared, had started off for the *Assistance* with a number of official letters for Sir Edward Belcher. On the way, while travelling over the ice, he had suddenly and completely disappeared, and it was supposed that he had met his death by slipping down into a crevice between two hummocks.

During the winter Belcher indulged in another fit of prophecy, in the course of which he foresaw that he would shortly receive orders from England to abandon his ships and make the best of his way home. He accordingly decided to anticipate these commands, and immediately set about making preparations for quitting the vessels in the spring. His orders came upon his officers like a bolt from the blue. Having no idea that he contemplated any such step, they had carefully husbanded their provisions, and, as their men were, on the whole, in excellent health, they could see no reason why an attempt to extricate the ships should not be made during the summer. Belcher, however, secure in his faith in his prophetic instinct, was as adamant, and nothing that they could say could move him from his purpose.

Accordingly, early in May the four ships were put in order and the crews, regretting bitterly the step which they were compelled to take, bade them a last farewell. In accordance with Belcher's orders, they met on the *North Star* at Beechey Island, and there they were eventually found by the two transport ships, the *Phoenix* and the *Talbot*.

The abandonment of these five vessels created much unpleasant feeling in the country. Not only did it entail a serious financial loss, apparently unnecessarily, but it also discouraged the Government from taking any further steps towards the discovery of the fate of Franklin and his expedition. In the middle of October, a court martial was held with a view to sifting the matter thoroughly. M'Clure and Kellett were first tried on the charge of abandoning the *Investigator* and the *Resolute*, but they were naturally enough acquitted, as they were able to show that they were acting under the orders of their superior officer. Their swords were returned to them with sundry graceful compliments by Admiral Gordon, the president of the court. Sir Edward Belcher was also acquitted, but with an implied rebuke, a rebuke which was pointed by the return of his sword in dead silence.

Most of the ships were never seen again. The *Resolute*, however, drifted 1000 miles through Barrow Strait, Lancaster Sound and Baffin Bay, and was eventually found off Cape Dyer by Captain J. M. Buddington, an American whaler. Buddington brought the ship safely to the United States' port of New London, where she was promptly purchased by the American Government for \$40,000. She was then refitted,

the ship's stores, flags, officer's libraries and her other appointments were restored to their original positions and she was presented to the Queen and the people of Great Britain as a token of goodwill on the part of the American nation.

CHAPTER XVII

RAE'S JOURNEYS OF 1851-53

RAE had displayed such ability when acting in conjunction with Sir John Richardson that the Government felt that they could not do better than entrust the conduct of the next expedition to him, so they asked Sir George Simpson for the loan of his services and commissioned him to continue the Franklin search in 1851 in whatever manner he thought best, only stipulating that the voyage should be made by boat.

With considerable difficulty he succeeded in getting two small boats built at the Great Bear Lake, and, after a preliminary sledge-expedition to Wollaston Land, in which he covered no less than 1100 miles in thirty-one days, on June 15, 1851, he started off on the serious work of the year from Provision Station, Kendall River, whither the boats had been brought to meet him. Passing through Dease Strait he soon made Cape Colburn, and instantly set to work to examine the east coast of Victoria Land, much of which had never been visited by a civilised man before. His boats, however, had to be abandoned after a while, for a stiff northerly gale and packed ice made it impossible for him to use them, and he felt that he would do better if he pursued his journey on foot. The rugged lime-

stone debris with which the shore was covered, however, made this mode of travelling exceedingly irksome, and, meeting with no better success inland, he was obliged to turn back after attaining lat. $70^{\circ} 03'$ long. $101^{\circ} 25'$ thus, though he did not know it, reaching a higher latitude than that in which the *Erebus* and *Terror* were abandoned.

On his way home he found a boat's stanchion and the butt-end of a small flagstaff, with a piece of rope attached to it in the form of a loop, which he rightly supposed to be relics of the Franklin expedition.

He returned to Fort Confidence, at the eastern extremity of the Great Bear Lake, without misadventure, after a brilliant journey, in the course of which he had explored 725 miles of unknown coast-line in Wollaston and Victoria Lands. For this service the Royal Geographical Society awarded him the founder's gold medal.

His next journey was undertaken not as an agent of the Government, but as a servant of the Hudson's Bay Company, and his mission was to explore the west coast of Boothia, of which very little was known at that time.

His first objective was his old headquarters at Repulse Bay, and thither he sailed in August. The outlook was calculated to fill with misgivings the heart of a less intrepid explorer than Rae. The weather, in the first place, was unfavourable for fishing and hunting. In the second place, not a trace of an Eskimo was to be found, from which fact he gathered that game was not so plentiful now as was the case when he had paid his last visit to Repulse Bay. Consequently he began

to feel serious doubts as to the possibility of spending the winter there, for, being of the opinion that the country ought always to be made to support the explorer, he had only brought sufficient provisions for three months, and had depended on his guns and his nets to make up the deficiency. Consequently, he did not feel justified in asking his men to share the dangers of an Arctic winter with him against their will, so he called them together, told them exactly how matters stood, and asked them whether they would stay there or return. Such was their confidence in their leader that they one and all volunteered to remain where they were. Luckily for them the weather improved a little, and before the end of September they had laid in a sufficient supply of provisions and fuel to last them up to the period of the spring migrations of the deer.

It was on the last day of March that Rae and four men started out on the great spring journey which would, as they hoped, lead them across Boothia Peninsula from Pelly Bay to the Castor and Pollux River, and thence northward along the western coast of Boothia as far as Bellot Strait, thus connecting Simpson's discoveries with those of Kennedy. They had been travelling for about three weeks when they happened to fall in with an Eskimo, from whom they obtained the first news of Franklin's fate. The story is, perhaps, best given in Rae's own words:—

“The man was very communicative, and, on putting to him the usual questions as to his having seen white men before, or any ships or boats, he replied in the negative; but said that a party of ‘Kabloonans’

(whites) had died of starvation a long distance to the west of where we then were, and beyond a large river. He stated that he did not know the exact place, that he had never been there, and that he could not accompany us so far."

The substance of the information then and subsequently obtained was to the following effect:—

"In the spring four winters past (1850), whilst some Eskimo families were killing seals near the north shore of a large island, named in Arrowsmith's charts King William Land, forty white men were seen travelling in company southward over the ice, and dragging a boat and sledges with them. They were passing along the shore of the above named island. None of the party could speak the Eskimo language so well as to be understood; but by signs the natives were led to believe the ship or ships had been crushed by ice, and that they were then going to where they expected to find deer to shoot. From the appearance of the men (all of whom, with the exception of one officer, were hauling on the drag ropes of the sledges, and were looking thin,) they were then supposed to be getting short of provisions, and they purchased a small seal, or piece of seal, from the native. The officer was described as being a tall, stout, middle-aged man. When their day's journey terminated they pitched tents to rest in.

"At a later day the same season, but previous to the disruption of the ice, the corpses of some thirty persons and some graves were discovered on the continent, and five dead bodies on an island near it, about a long day's journey to the north-west of the mouth of a large stream, which can be no other than Back's Great

Fish River, as its description and that of the low shore in the neighbourhood of Point Ogle and Montreal Island agree exactly with that of Sir George Back. Some of the bodies were in a tent or tents, others were under the boat, which had been turned over to form a shelter, and some lay scattered about in different directions. Of those seen on the island, it was supposed that one was that of an officer (chief), as he had a telescope strapped over his shoulders, and his double-barrelled gun lay underneath him. From the mutilated state of many of the bodies, and the contents of the kettles, it is evident that our wretched countrymen had been driven to the last dread alternative—cannibalism—as a means of sustaining life. A few of the unfortunate men must have survived until the arrival of the wild fowl (say until the end of May), as shots were heard, and fresh bones and feathers of geese were noticed near the scene of the sad event.

“There appears to have been an abundant store of ammunition, as the gunpowder was emptied by the natives in a heap on the ground, and a quantity of shot and ball was found below high-water mark, having probably been left on the ice close to the beach before the spring thaw commenced. There must have been a number of telescopes, guns (some of them double-barrelled), watches, compasses, etc., all of which seem to have been broken up, as I saw pieces of these different articles with the natives, and I purchased as many as possible, together with some silver spoons and forks, an order of merit in the form of a star, and a small plate engraved ‘Sir John Franklin, K.C.B.’”

These spoons and forks, it may be mentioned, bore

the crests and initials of some fifteen members of the expedition.

So far as Rae could discover, the natives had seen no traces whatever of the ships, and whenever they were questioned about them, they always reverted to the *Victory*, which was abandoned by Ross in the Gulf of Boothia in 1832. "My chief reason," he writes, "for believing that none of the ships had been found was the fact that, in 1854, the Eskimos were so destitute of wood, that, although they had plenty of sealskins to make their small hunting canoes, they had no wood for the frames. Now, as 1846 was fourteen years after Ross's vessel was abandoned, and as 1854 was only four years by Eskimo account—actually six years—after the Franklin ships were abandoned, the probability is that had these ships, or even one of them, been found, the natives would have had at least as much wood in 1854 as they had in 1847. The testimony of the *Fox* expedition of 1854 tends to support this idea, as no large wooden sledges were found, and no wood of a size larger than might have been got from the keel of a boat was seen. . . . I questioned the Repulse Bay Eskimos over and over again about whether any of the ships of the starved white men had been found, but they could tell me nothing, and always went back to the story of the *Victory*, stating that it was the only vessel from which wood had been obtained. I still believe that this was the ship to which the Eskimos referred when speaking to M'Clintock in 1859, and that they concealed the locality of the wreck lest he should wish to go there. . . . I may add that the white men when seen alive by the Eskimos made the latter

understand by signs and a word or two of Eskimo, that they were going to the mainland (noo-nah) to shoot deer (took-took). . . . The Eskimos also remarked that it was curious that the sledges were seen with the party when travelling, but none were seen where the dead were, although the boat or boats remained. I pointed out to them that the white men having got close to the mouth of the Great Fish River, would require their boat to go up it, but as they did not require the sledges any more, they might have burned them for fuel. A look of intelligence immediately lit up their faces, and they said that they might have done so, for there had been fires. . . . They said also that feathers of geese had been seen, so they had probably shot some of these birds—an evidence that some of the party must have lived until the beginning of June, the date at which the geese arrive so far north. . . . What struck me at the time, as it does still, was the great mistake made by Franklin's party in attempting to save themselves by retreating to the Hudson's Bay territories. We should have thought that the fearful sufferings undergone by Franklin and his companions, Richardson and Back, on a former short journey through these barren grounds, would have deterred inexperienced men from attempting such a thing, when the well-known route to Fury Beach, certainly more accessible than any of the Hudson Bay Company's settlements, and by which the Rosses escaped in 1832-33, was open to them. The distance from their ships to Fury Beach was very little greater than that from where Ross's vessel was abandoned to the same place, and Franklin and his officers must have known that an immense stock of provisions still remained

at the place where the *Fury* was wrecked, and where, even so late as 1859, an immense stock of preserved vegetables, soups, tobacco, sugar, flour, etc., still remained (a much larger supply than could be found at many of the Hudson's Bay trading posts); besides, the people would have been in the direct road of searching parties or whalers. The distance to Fury Beach from where the ships were abandoned, roughly measured, is, as nearly as possible, the same as that between the ships and the true mouth of the Great Fish River, or about 210 geographical miles in a straight line. Had the retreat upon Fury Beach been resolved upon, the necessity for hauling heavy boats would have been avoided, for during the previous season (that of 1847) a small sledge party might have been despatched thither to ascertain whether the provisions and boats at the depot were safe and available. The successful performance of such a journey should not have been difficult for an expedition consisting of 130 men who, in the record found in 1859 by M'Clintock, were reported all well in the spring of 1847."

These discoveries of Rae's were, of course, mere side issues, and had no connection with the main object of his journey, which was the exploration of the western coast of Boothia. He accordingly resisted the strong temptation to inquire more closely into Franklin's fate, and went on with the work which he had in hand. Unfortunately for him he had no sledges with him and no Eskimos to give him their assistance, for the natives who brought him the news already detailed soon left him; he was, in consequence, severely handicapped, and a naturally difficult journey was made

all the more arduous. By dint of great exertions, however, he succeeded in reaching Simpson's farthest on the Castor and Pollux River. Thence, in accordance with his instructions, he turned north, with the object of making his way to Bellot Strait, thus linking together the discoveries of Simpson and Kennedy. At Point de la Guiche, however, he was brought to a stop by fog and snow, and it soon became apparent that he could not attempt to reach the Strait without endangering the lives of his party. Accordingly, on May 7 he turned back, and finally reached Repulse Bay on May 26, after a brilliantly successful journey, during the course of which he had not merely added many miles of coastline to the chart, but had also gained the first authoritative news of the fate of Franklin, for which he was awarded the £10,000 offered by the Government.

CHAPTER XVIII

M'CLINTOCK AND THE "FOX"

THE news that Rae brought home naturally created the greatest stir in England, and it was felt that steps ought to be taken at once to discover whether any of the luckless explorers had succeeded in making their way to the territories of the Hudson's Bay Company. Unfortunately the Crimean War was at that time occupying the full resources of the nation, and the Government accordingly appealed to the Hudson's Bay Company to send out yet another expedition to search the neighbourhood of the Great Fish River. In response to this appeal, Mr James Anderson, chief factor of the Company, was detailed for the service, but, as he did not succeed in discovering any valuable clues, his journey need not detain us here.

After this failure the Government was indisposed to take any further steps in the matter, arguing—and it is not to be denied that they had a certain amount of reason on their side—that it was practically impossible that any member of the expedition should be still alive, seeing that eleven years had elapsed since they left England. Lady Franklin, however, was by no means disposed to let matters rest here, so, with the help of a number of friends, she fitted out the *Fox*, a steam

yacht of 157 tons, and placed it under Commander M'Clintock, whose brilliant work in the Arctic Seas made him peculiarly fitted for such a mission. Lieutenant W. R. Hobson joined as second in command, Captain Allen Young consented to act as sailing-master, while many other members of the company had already seen Arctic service, among them being Dr Walker and Carl Petersen, the interpreter.

Fully provisioned for twenty-eight months, the *Fox* set sail from Aberdeen on July 1, 1857. M'Clintock found the ice in Melville Bay in a far from satisfactory condition, but, being determined to run any risks rather than linger on the journey, he entered the pack and attempted to make Lancaster Sound. For three weeks or so he pushed on in the face of great difficulties, but it soon became evident that he was not destined to cross the bay that year, and before the middle of September the *Fox* was firmly frozen into the pack with no prospect of release until the following spring.

After a somewhat exciting winter, during the course of which the voyage of the yacht was, on more than one occasion, nearly brought to an untimely end, she was at last released, and, after putting into Holsteinberg Bay for repairs, she made her second attempt to cross Melville Bay. On this occasion fate was kinder to her, and, on August 6, she steamed up Lancaster Sound, anchoring off Beechey Island on the 11th. Here M'Clintock landed a handsome tombstone sent out by Lady Franklin in memory of her husband and his companions, which was placed close to the monument erected to the memory of Bellot

and those who had died on the previous search expeditions.

Peel Sound proved impracticable, so M'Clintock determined to make for Bellot Strait, through which no ship had yet sailed, and the very existence of which was disputed by many. All doubts upon the latter point were soon set at rest, but the violent currents which raced through the strait, bearing with them vast masses of ice that threatened the ship with instant destruction whenever she attempted to force a passage through, made it impossible for M'Clintock to reach the western ocean, and, after several gallant attempts, he was obliged to resign himself to the inevitable, and to make preparations for spending the winter in an indentation on the north side of the strait, which he named Port Kennedy.

The winter passed without misadventure, and on February 17 M'Clintock set out on a preliminary expedition, with a view to gleaning such information as he could from the Boothian natives. To his disappointment the coast seemed completely deserted, and he was thinking of turning back when he came upon four Eskimos, members of a tribe which was established in a snow village not far off. From these men he obtained some tidings of the fate of the missing explorers, though they could not add very much to what he already knew. A number of white men, they said, had been starved to death on an island near a river. None of them had seen the men, but both they and their friends had articles in their possession which had once belonged to the whites. Having engaged these natives to build him a snow-hut for the muni-

ificent remuneration of a needle apiece, he sent them back to tell their friends that he was willing to purchase any relics that they possessed at a good price. On the following day the whole community, from the oldest man to the youngest baby, put in an appearance, bringing with them numbers of spoons, forks, buttons, and knives, which M'Clintock immediately acquired. He then set out on the return journey to the ship, reaching Port Kennedy on March 14. During his absence of twenty-five days he had covered about four hundred and twenty miles, and had completed the discovery of the coast-line of continental America.

Immediately after his return he despatched Young, who had been depositing a store of provisions on Prince of Wales' Land, on a trip to Fury Beach, with instructions to bring back a supply of sugar from the stores left there by Parry. He found an immense stock of provisions of all kinds, most of them in a marvellous state of preservation. In addition to 1200 lbs. of sugar, he brought back a couple of tins of "carrots plain" and "carrots with gravy," which had lain on the shore for thirty-four years and were still in excellent condition.

By the beginning of April everything was in readiness for the extended sledge journeys. M'Clintock arranged that the operations should be conducted by three different parties, led by himself, Hobson, and Young. Each party was to consist of four men drawing one sledge and six dogs drawing the second sledge, besides the officer in charge and the dog-driver. He was, of course, a past master of the art of arranging sledging expeditions, and so carefully had he disposed

his depots of provisions, and so skilfully had he adjusted the travelling equipment of the parties, that he expected that each of them would be able to absent itself from the ship for seventy or eighty days without any difficulty whatever.

M'Clintock and Hobson started off on their journeys on April 2. For a while their routes coincided, and, by hoisting their tents as sails, and so taking advantage of a favourable breeze, they made excellent progress. It was not until they were well on their way down the coast of Boothia that they fell in with natives, and from these they learnt that two ships had been seen some years before off King William Land. One of them had sunk in deep water, but the other had been forced ashore by the ice, where she was still supposed to remain, though much broken. It was from the latter ship, according to their story, that they had obtained most of their wood.

On April 28 they reached Cape Victoria, on the south-west Coast of Boothia Felix. Here they were to separate, and all credit must be given to M'Clintock for his generosity to his junior officer. Though he knew that, if relics were to be found at all, it would be on the west coast of King William Land, he sent off Hobson to explore that district, reserving the far less promising east coast for himself. Hobson's instructions were to cross to Cape Felix, the most northern point of King William Land, and then to search the whole of the west coast for the missing ship or any relics or records that might be deposited there. Should his search prove unsuccessful, he was to cross to Victoria Land, and to complete the exploration of that coast

from Collinson's farthest point. In the meanwhile, M'Clintock himself meant to push southward down the east coast of King William's Land in the direction of the Great Fish River.

The results were exactly as we have indicated. M'Clintock examined the whole of the east coast and the estuary of the Great Fish River with the utmost care, but, with the exception of an occasional relic obtained from the natives, his search was fruitless. He accordingly crossed the strait on May 24, and proceeded to link up his own explorations with those of Hobson. On the following day his patience was at last rewarded, for, while slowly walking along a gravel ridge near the beach, which the winds kept unusually bare of snow, he came upon a skeleton partly exposed. From the clothing that lay near by he gathered that the victim must have been a steward or officer's servant, who, selecting the bare ridge-top as affording less tiresome walking, had fallen on his face in the position in which his skeleton was found. It may here be said that an old woman with whom M'Clintock communicated on his outward journey had told him that the unfortunate explorers had "fallen down and died as they walked along." Of the melancholy truth of her words this discovery afforded a terrible confirmation.

At Cape Herschel M'Clintock found the cairn erected by Simpson, and this he demolished in the hope that the missing explorers might have left some record there, but he found nothing. Twelve miles further on he learnt that that for which he had been searching so diligently had been discovered, for he came upon a second cairn of more recent construction—the cairn

which marked the end of Hobson's brilliantly successful journey. In penetrating thus far Hobson had passed the point at which the *Erebus* and *Terror* had been abandoned, and had found the first, and, indeed, the only important record of the journey which it fell to the lot of a white man to discover.

The record, which was enclosed in a tin box and found beside a tumbled cairn, was brief enough, but it contained the whole history of the ill-fated expedition. It consisted merely of one of those printed Government forms which were supplied to all discovery ships. These forms were intended to be filled up with intimations of discoveries, accident or distress, and then to be enclosed in a bottle and thrown into the sea or else buried under a cairn. A note at the head, written in several different languages, requested the finder to forward the paper to the Secretary of the Admiralty, or, if more convenient, to hand it over to the nearest British consul, with an intimation concerning the time and place at which it had been found. It was on one of these that Franklin's officers had made their last communication to the world. The contents of the document ran as follows:—

“ H.M. ships *Erebus* and *Terror*,
Wintered in the ice in lat. $70^{\circ} 5' N.$, long. $98^{\circ} 23' W.$
28th of May 1847.

Having wintered in 1846-7 at Beechey Island in lat. $74^{\circ} 43' 28'' N.$, long. $91^{\circ} 39' 5'' W.$, after having ascended Wellington Channel to lat. 77° , and returned by the west side of Cornwallis Island.

Sir John Franklin commanding the expedition.
All well.

In 1846 The paper found by the party consisting of 2 Officers and 6 men left the ship on Monday 24th May 1847. The paper was found in the ice in the bay of the Cape of Good Hope. The paper was found by the party consisting of 2 Officers and 6 men. The paper was found in the ice in the bay of the Cape of Good Hope. The paper was found by the party consisting of 2 Officers and 6 men.

The paper was found in the bay of the Cape of Good Hope. The paper was found by the party consisting of 2 Officers and 6 men. The paper was found in the ice in the bay of the Cape of Good Hope. The paper was found by the party consisting of 2 Officers and 6 men.

H. M. S. Porpoise and Yessie
 { Wintered in the ice in
 25 of May 1847 } Lat. $70^{\circ} 5' N$ Long. $98^{\circ} 23' W$
 Having wintered in 1846 - 7 at Beechey Island
 in Lat. $74^{\circ} 43' 28'' N$ Long. $91^{\circ} 59' 15'' W$ after having
 rounded Wellington Channel to Lat. 77° and returned
 by the West side of Cornwallis Island.

Commander.
 John Franklin commanding the Expedition.

WHOEVER finds this paper is requested to forward it to the Secretary of the Admiralty, London, with a note of the time and place at which it was found: or, if more convenient, to deliver it for that purpose to the British Consul at the nearest Port.

QUINCONQUE trouvera ce papier est prié d'y marquer le tems et lieu ou il l'aura trouvé, et de le faire parvenir au plutot au Secretaire de l'Amirauté Britannique à Londres.

CUALQUIERA que hallare este Papel, se le suplica de enviarlo al Secretario del Almirantazgo, en Londres, con una nota del tiempo y del lugar en donde se halló.

EEN ieder die dit Papier mogt vinden, wordt hiermede verzogt, om het zelve, ten spoedigste, te willen zenden aan den Heer Minister van des Marine der Nederlanden in 's Gravenhage, of wel aan den Secretaris der Britsche Admiraliteit, te London, en daar by te voegen eene Nota, inhoudende de tyd en de plaats alwaar dit Papier is gevonden geworden.

FINDEREN af dette Papiir ombedes, naar Leilighed gives, at sende samme til Admiralitets Secretairen i London, eller nærmeste Embedsmand i Danmark, Norge, eller Sverrig. Tiden og Støedit hvor dette er fundet ønskes venskabeligt paategnet.

WER diesen Zettel findet, wird hier-durch ersucht denselben an den Secretair des Admiralitets in London einzusenden, mit gefälliger angabe an welchen ort und zu welcher zeit er gefunden worden ist.

Party consisting of 2 Officers and 6 men
 left the ship on Monday 24th May 1847.
 G. M. J. Des Vaux Mate.

The paper was found in the bay of the Cape of Good Hope. The paper was found by the party consisting of 2 Officers and 6 men. The paper was found in the ice in the bay of the Cape of Good Hope. The paper was found by the party consisting of 2 Officers and 6 men.

The paper was found in the bay of the Cape of Good Hope. The paper was found by the party consisting of 2 Officers and 6 men. The paper was found in the ice in the bay of the Cape of Good Hope. The paper was found by the party consisting of 2 Officers and 6 men.

Party, consisting of 2 officers and 6 men, left the ships on Monday, 24th May 1847.

GM. GORE, Lieut.

CHAS. F. DES VŒUX, Mate."

The following notes were written round the margin :—

"April 25th, 1848.—H.M. ships *Erebus* and *Terror* were deserted on the 22nd April, 5 leagues N.N.W. of this, having been beset since 12th September 1846. The officers and crews, consisting of 105 souls, under the command of F.R.M. Crozier, landed here in lat. $69^{\circ} 37' 42''$ N., long. $98^{\circ} 41'$ W. Sir John Franklin died on 11th June 1847; and the total loss by death in the expedition has been, to this date, 9 officers and 15 men.

(Signed)

F. R. M. CROZIER,
Captain and Senior Officer.

(Signed)

JAMES FITZJAMES,
Capt. H.M.S. *Erebus*.

And start on to-morrow, 26th,
for Back's Fish River."

"This paper was found by Lieutenant Irving under the cairn supposed to have been built by Sir James Ross in 1831, four miles to the northward, where it had been deposited by the late Commander Gore in June 1847. Sir James Ross's pillar has not, however, been found; and the paper has been transferred to this position, which is that in which Sir James Ross's pillar was erected."

From this paper it will be seen that Franklin had made the most remarkable voyage ever recorded in the annals of Arctic exploration. After being sighted in Baffin's Bay on July 26, 1845, he had sailed through

Lancaster Sound and Barrow Strait, and up Wellington Channel as far as 77° N. He had then returned to the mouth of the channel via the west coast of Cornwallis Island, and had wintered off Beechey Island in 1845-46 (the date given in the paper is obviously wrong). As soon as he was released he had attempted to make his way south to the American coast, but had been caught in the pack, never again to be released. The winter of 1846-47 was passed at a point about fifteen miles north-west of Cape Felix, the most northerly point of King William Island; and in the spring, when all on board were reported to be well, two officers and six men started off on an expedition, the direction and purpose of which are not stated. A fortnight later death spared Franklin the pain of knowing that his party could never again reach home, and of seeing his men dying of cold and starvation, one by one, before his eyes. The summer brought no prospects of escape, and during the following winter the two ships drifted southward with the ice for a distance of about thirty miles. As early in the spring as the conditions permitted, all the survivors left the ship in an effort to win their way back to civilisation, but not a single one of them succeeded in accomplishing his task. "So sad a tale," says M'Clintock, "was never told in fewer words. There is something deeply touching in their extreme simplicity, and they show in the strongest manner that both the leaders of this retreating party were actuated by the loftiest sense of duty, and met with calmness and decision the fearful alternative of a last bold struggle for life, rather than perish without effort on board their ships."

Before reaching the *Fox* M'Clintock was destined to find yet more grim evidence to the fate of the unfortunate explorers. After rounding Cape Crozier, the westernmost point of King William Island, the desolation of which was absolutely beyond description, he came upon a boat which had formed part of the Franklin expedition, and in which lay two skeletons. Hobson had previously discovered the boat, and had left in it a note for his commander to the effect that the most careful search had failed to reveal any journal or other memoranda such as might fill in the details of the story of which they already knew the terrible outline. M'Clintock instantly set about another examination of the boat and its surroundings, in the hope that he might come upon something that had escaped the eyes of his junior officer, but he was unrewarded. The boat itself he found to be of a light build such as would be suitable for the ascent of the Great Fish River, and fitted with sails, a sloping canvas roof, an ice-grapnell and a deep-sea sounding-line, which was probably intended for river work as a track-line. She was, however, mounted on so heavy a sledge that seven men in the best of health would have found dragging her over the ice no easy task.

In this boat lay two skeletons, one of them huddled up in the bows, and the other across the afterthwart. Beside them were five watches, two guns, and a number of books, for the most part devotional, but, search as they would, M'Clintock and his men could find no trace of a pocket-book or journal, nor even a scrap of clothing marked with a name which might reveal the identity of the two victims. Pieces of plate

and an extraordinary variety of miscellaneous articles, ranging from two rolls of sheet-lead to tacks, were scattered about in the boat, and these M'Clintock describes as "a mere accumulation of dead weight, of little use, and very likely to break down the strength of the sledge-crews. The only provisions we could find," he continues, "were tea and chocolate. Of the former, very little remained, but there were nearly forty pounds of the latter. These articles alone could never support life in such a climate, and we found neither biscuit nor meat of any kind."

From the direction in which the boat's head was pointing, and from its contents, M'Clintock concluded that the party attached to it had started out for the Great Fish River, but, finding themselves too utterly worn out to proceed far, had turned back intending to make their way to the ship. Unable to drag the boat any further, they had left it where it was found by the explorers, meaning to bring back food to their two companions who had been obliged, through weakness, to remain behind. The fact that five watches were left in the boat points to the conclusion that they had not thought of abandoning it finally. Overcome by cold and fatigue, however, they must have perished on the way.

After leaving the boat, M'Clintock pushed on his way with all possible dispatch, searching for traces of the wrecked ship as he went, but without success. He reached Point Victory on June 2, and there he found a note from Hobson, telling him that he had met with no better fortune in the execution of this part of his mission, but that he had found a duplicate of the

record which we have already described. M'Clintock spent some little time in examining the cairn under which the paper had been discovered, and found strewn about it a vast variety of such miscellaneous articles as cooking-stoves, pickaxes, shovels, four feet of a copper lightning conductor, long pieces of brass curtain rods, a medicine chest, and some scientific instruments. There was also a pile of clothing four feet high, of which every article was searched. The pockets, however, were all empty, and not a single piece of the clothing was marked with its owner's name. "These abandoned superfluities," M'Clintock writes, "afford the saddest and most convincing proof that here—on this spot—our doomed and scurvy-stricken countrymen calmly prepared themselves to struggle manfully for life."

There was now nothing left for M'Clintock but to return to the *Fox*, and this he accordingly did with all possible speed, reaching Bellot Strait on June 18. On the return journey he learned from a note left at one of the depots that Hobson had been taken seriously ill, and had grown so feeble that it had been found necessary to place him on one of the sledges. To his great relief he heard, on reaching the ship, that the scurvy from which his junior was suffering had already yielded to treatment, and that he was on the high road to recovery.

With the principal fruits of Hobson's journey we have already dealt, and the rest may be dismissed in a few words. After leaving M'Clintock at Cape Victoria, he crossed James Ross Strait without any difficulty, and immediately turned westward round Cape Felix.

Here he came upon the first signs of the Franklin expedition, in the shape of "a large cairn, close beside which were three small tents, with blankets, old clothes, and other vestiges of a shooting or magnetic station. But," says M'Clintock, "although the cairn was dug under and a trench dug all round it to a distance of ten feet, no record was discovered. . . . Two miles farther to the southwest a small cairn was found, but neither record nor relics; and about three miles to the north of Point Victory a third cairn was examined, but only a broken pickaxe and empty canister found." These with, of course, the boat and the famous record, completed the list of Hobson's discoveries.

In the meanwhile Young had been very far from idle. It had been his mission to explore Peel, or, as it was afterwards called, Franklin Strait and Prince of Wales Island, and he had accomplished his task in the face of great difficulties. In the first place, gales were almost incessant, and it was no easy matter to make any headway at all against them; in the second place, he was disgusted to find that a channel existed between Prince of Wales Land and Victoria Land, and that his field of discovery would, in consequence, be widened, and his search lengthened. Accordingly, with a view to having as few mouths to feed as possible, he sent back most of his men and dogs to the ship, and tramped on accompanied only by a young man-of-war's man named George Hobday. For forty days they pushed forward till Young became so ill through cold and exposure that he was obliged to return to Port Kennedy, which he reached on June 7. His spirit, however, was quite indomitable, and, in spite of the protests of the doctor,

he was off again on a fresh journey three days later. In all, he was away from the ship for seventy-eight days, during the course of which he explored no fewer than 380 miles of new coastline. This, with the 420 miles explored by M'Clintock and Hobson, makes the splendid total of 800 miles, a record of which the expedition had good reason to be proud.

M'Clintock now determined to make the best of his way home as soon as the thaw should release him. Steam was got up on August 6, in order that the opportunity might be seized when it arrived, which desirable event took place three days later. The death of his engineer had left M'Clintock very short handed, and he himself stood at the engines for twenty-four consecutive hours. Though held up occasionally by the ice, the return journey passed without any misadventure, and the *Fox* reached the English Channel on September 20.

It may here be added that in 1875 Captain Young attempted to follow the route opened up by Franklin and to reach Behring Strait via Peel and Franklin Straits; an impenetrable ice-barrier in Peel Strait, however, compelled him to turn back. In 1878-79, Lieutenant F. Schwatka, of the United States Army, and Mr W. H. Gilder, in the course of a brilliant journey, thoroughly explored the route over which the men of the *Erebus* and *Terror* were supposed to have travelled on their way to the Great Fish River, but, though they found many relics of the expedition, they could not discover a single paper or document of any kind.

CHAPTER XIX

THE VOYAGES OF KANE AND HAYES

UP to the middle of the nineteenth century America had not played a very important part in the history of Arctic exploration. In 1853, however, an expedition set out under the command of Dr Elisha Kent Kane—the young doctor who accompanied Lieutenant De Haven in the *Advance* and *Rescue*—which won immortality for itself by penetrating Smith Sound to a point never reached by any previous explorer. Although Kane had special instructions from the Secretary of the United States Navy to “conduct an expedition to the Arctic seas in search of Sir John Franklin,” it is really hardly possible to regard his enterprise as a serious part of the Franklin search, for it concerned itself with a region in which there was no possibility of finding any traces of the missing explorers.

The ship chosen for the expedition was our old friend the *Advance*, and the expenses were shared by Mr Grinnell, Mr Peabody, and a number of American scientific institutions. The crew consisted of seventeen officers and men, among them being Brooks and Morton, both of whom had served under De Haven, and Isaac Israel Hayes, a young surgeon, who was destined to conduct an expedition on his own account later on. The equipment of the ship seems to have been carried

out with but little regard to the laws of hygiene, as recognised by Arctic explorers. "We took with us," says Kane, "some 2000 lbs. of pemmican, a parcel of Borden's meat biscuit, some packages of exsiccated potato, some pickled cabbage, and a liberal quantity of American dried fruits and vegetables. Besides these we had the salt beef and pork of the navy ration, hard biscuit and flour. . . . I hoped to obtain some fresh provisions in addition before reaching the upper coast of Greenland." Such a dietary as this made it almost inevitable that scurvy would break out, and, as will be seen later on, the crew suffered terribly from the ravages of this fearful disease.

It was on May 30, 1853, that the *Advance* set sail from New York, never to return. Her passage north through Baffin Bay was by no means free from difficulties, but by August 6 she was in sight of Cape Alexander and Cape Isabella, the tremendous cliffs which guard the entrance to Smith Sound. On the following morning, as he was nearing Littleton Island, which lies well within the mouth of the sound, Kane was disappointed to see the ominous ice-blink ahead of him, which, taken in conjunction with the fact that the wind was freshening from the northward, augured ill for the future. However, he decided to press on as best he could, only pausing to place a boat and a store of provisions *en cache* on the island, a step on which he had good cause to congratulate himself later on.

On the next day he first closed with the ice, and began his attempt to bore his way through. A fog, however, compelled him to beat a retreat into a land-locked cove, which he named "Refuge Harbour," where

he had to remain for several days. On the 13th, taking advantage of a change in the weather, he attempted to push on once more, but he was constantly hampered by gales ; these, by the 20th, had increased to a hurricane, which very nearly made an end of the whole party.

By the 22nd the storm had abated, and Kane was able to proceed on his way. His rate of progress, however, was exceedingly slow, for he was obliged to send men on to the pack with a tracking rope to drag the ship along as best they could. On the following day he found that he had reached lat. $78^{\circ} 41'$ N., a point $13'$ higher than that reached by Inglefield, and farther north than any explorer, with the exception of Parry, had ever penetrated. He now began to realise that there was very little prospect of his being able to proceed further that year, and he had to confess that he did not like the idea of being obliged to spend a winter in so northerly a latitude, as he was so surrounded with ice that his chances of escape next year were uncertain. He accordingly called a meeting of his officers and crew, and took their opinion upon the situation. Why he took this course is not particularly clear, for the opinions expressed at that meeting did not influence him in the least. Only one member of the expedition was in favour of remaining where they were, while all the rest desired to return south without any delay whatever ; yet Kane promptly decided in favour of the former course, and set about finding winter quarters for the *Advance*. These he eventually discovered in Rensselaer Harbour, lat. $78^{\circ} 37'$ N., long. 71° W.

The cold that winter was intense, and the ship's thermometers ranged from 60° to 75° below zero. Nor did spring bring much improvement in the conditions, and Kane found himself obliged to carry out the work of preparation for his sledge journeys in very trying circumstances. The matter, however, was not of a nature that would brook delay, so ten men under Mr Brooks, the first officer, were sent off to place a store of provisions *en cache* at a point about ten days' journey from the brig.

The whole of the party came within an ace of perishing on the ice, and had it not been for the efforts of Olsen, the sailing master, Sontag, the astronomer, and Petersen, the interpreter, who staggered back to the ship in search of relief, they must have been frozen to death. As it was, two men died of cold and exposure.

Towards the end of April Kane set out on that sledge journey along the east shore of Smith Sound which has raised him to the front rank of Arctic explorers. His expedition was conducted in the face of two great difficulties—sickness and lack of provisions. As early as May 30 the scurvy which had attacked the crew during the winter reappeared, and many members of the party fell victims to it, Kane himself suffering so severely that his limbs became quite rigid, and he had to be lashed to the sledge. The shortage of provisions was not due to any lack of care in the preparations for the expedition, but to the depredations of the bears, which had found the contents of the *caches* so much to their liking that they had completely demolished them.

“The pemmican,” says Kane, “was covered with

blocks of stone, which it had required the labour of three men to adjust ; but the extraordinary strength of the bear had enabled him to force aside the heaviest rocks, and his pawing had broken the iron casks which held our pemmican literally into chips. Our alcohol cask, which had cost me a separate and special journey in the late fall to deposit, was so completely destroyed that we could not find a stave of it."

In spite of these difficulties, however, Kane succeeded in reaching the Great Glacier of Humboldt, that tremendous sea of ice, one of the largest of its kind, which stretches from $79^{\circ} 12'$ to $80^{\circ} 12'$. By the end of the first week in May the condition of the party had become so bad that it was useless for them to attempt to proceed any further. Kane was delirious, his companions were almost past walking, and it was only through the most heroic perseverance that they succeeded in reaching the ship at all.

For a few days after their return the doctor had his hands full, but under his skilful treatment the patients recovered rapidly, and the work of exploration was immediately resumed. The first to leave the ship was Dr Hayes, who was sent off with a sledge and a team of dogs to explore the country north and east of Inglefield's Cape Sabine. The dogs gave him some little trouble, as their harness was constantly breaking, and the only material at hand for repairing it consisted of his own sealskin breeches, large portions of which he was obliged to sacrifice for the good of the cause. However, he prosecuted his explorations as far as Dobbin Bay before turning back to the ship.

Though he had gained a great deal of valuable knowledge concerning the coast-line on either side of Smith Sound, Kane was still uncertain whether he was in a channel leading into a polar sea or in a *cul-de-sac*. From his observations of the tides and the drift of the ice he was inclined to take the former view, and, in the hope of setting all doubts upon the subject at rest, he decided to send out another party, with dogs, which was to be subsisted as far as the Great Glacier by provisions carried by a foot party in advance. Unfortunately scurvy is not a disease which is thrown off easily, and, when the time for making up these parties arrived, only five men were found to be in reasonably good health. He did the best that he possibly could in the circumstances. He told off Morton, M'Gary, and three men to take provisions to the Great Glacier, where they were to be joined by Hans Christian, the hunter of the party, with dogs. Morton and Hans were then to cross the strait and advance along the distant coast as far as they could.

The two explorers attacked their part of the task with immense ardour, and eventually succeeded in penetrating as far as Cape Constitution. They returned to the ship with marvellous tales of open seas and waves dashing against the cliffs, which rejoiced Kane's heart exceedingly, for they not only supported his theories, but they also gave colour to the popular fallacy that an ice-free ocean existed in the direction of the Pole. Unfortunately, however, it subsequently transpired that Morton and Hans were quite mistaken. There is, of course, no reason to suppose that their stories were mere flights of imagination, composed for

the express benefit of their commander. Other explorers have made similar illusory discoveries, and have chronicled them in perfectly good faith. No doubt Morton and Hans honestly believed that they saw an open polar sea off Cape Constitution ; the fact remains, however, that they saw nothing of the kind.

By the beginning of June 1854, Kane had begun to realise that he was in a very uncomfortable situation. All his men were diseased, and several of them were completely disabled ; fuel and food were becoming very short ; and, to crown all, there seemed no prospect of extricating his ship that year. He soon came to the conclusion that the only thing for him to do was to attempt to reach Beechey Island, and there to ask for assistance from Sir Edward Belcher. Accordingly, he patched up his whale-boat to the best of his ability, and, taking with him the only five members of his crew who were in reasonably good health, he started off on his hazardous voyage. He was not, however, destined to get very far, for he found the mouth of Smith Sound so cumbered with ice that he had no choice but to give orders for a retreat on the ship, which he reached on August 6.

A careful inspection of his stores now forced him to the conclusion that he must cut down the allowance of fuel. Here is the passage in his journal in which he records the step. "Reduced our allowance of wood to six pounds a meal. This, among eighteen mouths, is one-third of a pound of fuel each. It allows us coffee twice a day and soup once. Our fare, besides this, is cold pork boiled in quantity and eaten as required. This sort of thing works badly, but I must reserve coal

for other emergencies. I see darkness ahead. I inspected the ice again to-day. Bad! bad!—I must look another winter in the face. I do not shrink from the thought; but, while we have a chance ahead, it is my first duty to have all things in readiness to meet it. It is horrible—yes, that is the word—to look forward to another year of disease and darkness to be met without fresh food and without fuel. I should meet it with more tempered sadness if I had no comrades to think for and protect.”

There was now only one expedient to be tried, and that was a land journey in search of succour from the Eskimos. Accordingly Hayes, Petersen and seven men set out from the ship on August 28, leaving the rest of their companions to shift for themselves as best they could. Had it not been for an alliance which they made with a tribe of Eskimos, whose settlement lay some seventy-five miles from the ship, they would probably have perished miserably of cold and starvation. By the terms of this alliance the natives undertook to refrain from stealing from the ship, and to supply the sailors with fresh meat and dogs, while Kane in return promised them the assistance of his men on their hunting expeditions, and undertook to provide them with needles, knives, and other trifles dear to the heart of the native. The sledge journey from the ship to the settlement and back was, however, so long and arduous that Kane only undertook it when it was absolutely necessary.

On December 7 a number of Eskimos put in an appearance bringing with them two members of the exploring party. From them Kane learnt that they

had failed hopelessly in their mission, and that their comrades were housed at a settlement 200 miles away. He accordingly sent back the Eskimo escort with such supplies as he could spare to bring back the remainder of his friends. So rapidly did the natives travel that five days later they were back again with Hayes and his party, all of whom were in a state of collapse. Indeed, had it not been for the great kindness with which they had been treated by the Etah Eskimos they must inevitably have perished.

A more unutterably miserable winter was probably never passed by any band of Arctic explorers. As the anti-scorbutics, the food and the fuel failed, the condition of the men grew worse and worse, and Kane made up his mind that as soon as spring came round he would spare no efforts to make his way to civilised regions. The only person on board who seems to have been reasonably happy was the hunter, Hans Christian. While all his comrades were wondering how in the world they were to support life, he had fallen head over ears in love with a fair Eskimo damsel of Etah, to whom he intended to get married as soon as he could make his way to the nearest settlement.

With the details of the return journey we need not concern ourselves. It began in May, and after almost superhuman exertions, the party succeeded in reaching Upernivik on August 3. Thence they were taken back to the United States in the squadron which, under the command of Lieutenant Harstene, had been sent out to their rescue.

In the following year Hayes, Kane's surgeon, set out in the schooner *United States* on an expedition, the

object of which was to verify Morton's story of the open polar sea, in which the worthy doctor had the firmest belief. The winter was marked by a tragedy, for Sontag, the astronomer and probably the most valuable member of the party, was frozen to death on a sledging expedition. Had he been spared he might have saved Hayes from perpetrating the extraordinary series of blunders which were the most startling feature of his spring journey up the coast of Grinnell Land. Not only did he make a number of unreliable observations, with the result that his chart had to be entirely altered by subsequent explorers, but he also imagined that he saw a magnificent polar sea, which proved ultimately to be nothing but the southern half of Kennedy Channel. This part of the channel freezes late and opens early, owing to the exceptionally high tides, and is rarely entirely closed.

CHAPTER XX

HALL AND THE "POLARIS"

WE now come to one of the most curious figures in the whole history of Arctic exploration, that of the American, Charles Francis Hall, who, in the year 1864, set sail for Smith Sound in the barque *Polaris*. Hall came from Cincinnati, and in his earlier days he followed the peaceful avocation of a blacksmith. He was an ambitious man, however, and something of a dreamer, and he had not the least intention of spending all his days at the forge. Journalism claimed his attention for a while, and he became editor of the Cincinnati *Daily Penny Press*, but his heart yearned towards the Polar regions, and, though he had never seen the sea in his life, he felt himself irresistibly impelled to quit the life in which he was already beginning to win some measure of success for the more hazardous career of an Arctic explorer.

It was probably the fate of the Franklin expedition which first made him turn his thoughts seriously in this direction. He firmly believed that the English explorers had been absolutely wrong in their methods of conducting the search. The only way by which success could possibly be obtained was, he imagined, by settling among the Eskimos, by acquiring their language, their ways and their confidence, and so



ESKIMO ARCHITECTS

FROM A DRAWING BY CAPT. LYON

obtaining from them any information which they might possess concerning the fate of Franklin's party, many of whom he believed to be still alive.

Hall seems to have imagined that he was "called" to undertake this task himself, so, with an energy and enterprise which must command our admiration, he promptly set about the fulfilment of his mission.

Funds having been provided by Henry Grinnell and a number of other men who were interested in the project, he set sail in the barque *George Henry* with a crew of thirty officers and men, including an interpreter. His object was to proceed direct to Boothia, and there to spend three years among the natives, living with them as one of themselves, and completing the history of the Franklin expedition. This scheme, however, he only partially fulfilled. He lived with the natives, it is true, and became by far the greatest authority of the day on their manners and customs, but, beyond demonstrating that what was known as Frobisher Strait was in reality a bay, he did nothing towards adding to the world's knowledge of the Arctic regions, or towards elucidating the mystery of the fate of the Franklin expedition. He returned home in 1862, and occupied himself for some time in writing up an account of his experiences.

Two years later he sailed in the barque *Monticello* on his second expedition. On this occasion he made for Repulse Bay, where he proposed getting into touch with the natives and acquiring from them all the information that they possessed about Franklin's party and ships. Unfortunately, it appears that the natives knew how dear his mission was to him, and, not

wishing to disappoint him, employed their imagination to fill in the gaps in their actual knowledge. As was only inevitable, Hall ultimately discovered that the circumstantial tales with which they regaled him were largely flights of fancy, and, completely disillusioned, he made his way home again to America.

During his sojourn with the Eskimos, however, he had acquired a real taste for Arctic exploration, and he at once decided that, as there seemed to be nothing further to be learned about the *Erebus* and *Terror*, he had better direct his attention towards the North Pole. He was a man of unbounded enterprise, and he soon found friends who were ready to help him to launch his new project. Chief among these was Mr Robeson, Secretary of the American Navy Department, through whose offices Congress voted him \$50,000 towards his expenses. A wooden river gunboat of 387 tons, originally called the *Periwinkle* but rechristened the *Polaris*, was placed at his disposal, and in this he set sail from New London on July 3, 1871.

Truth to tell, the expedition was never really marked out for success, as is pointed out by Sir A. H. Markham in the following passage: "He (Hall) had no advantages of education, and was unacquainted with nautical astronomy. He was thus in no sense a seaman, but rather an enthusiastic leader depending on others to navigate his vessel and to render his discoveries useful. He possessed, however, one great advantage. His two previous expeditions had thoroughly acclimatised him, and given him a complete knowledge of Eskimo life. The men who accompanied him were also badly chosen. Buddington was an old

whaling captain, without any interest in the undertaking; and Tyson (the assistant navigator) was a man of the same stamp. Chester, the mate, was a good seaman and excellent harpooner, but one who had merely shipped from the inducement of high pay. Dr Bessels, a former student of Heidelberg, who had served in one of the German Arctic expeditions and in the Prussian army during the invasion of France, was the only man of scientific attainments in the ship, and the only man, besides Hall, who felt any enthusiasm for the objects of the voyage. Altogether it was an ill-assorted company, without zeal for discovery, without discipline or control, and in which every man considered himself as good as his neighbour."

It was, perhaps, a little unfortunate that this expedition, which was so poorly adapted to make full use of its opportunities, should have been more favoured by luck than any of its predecessors. After stopping at Upernivik to pick up Hans Christian, who brought with him his wife and a family which had already attained to considerable dimensions, the *Polaris* sailed merrily on past Rensselaer Harbour, through the so-called "open Polar Sea," through Kennedy Channel, across Hall Basin and up Robeson Channel, till, on August 30, she was in lat. $82^{\circ} 16'$, 250 miles beyond the furthest point reached by any previous explorer. It seems, indeed, that she might have penetrated even further than that without much difficulty had Hall only been a practical seaman, for the stream of ice by which she was stopped was quite insignificant, and there was a magnificent water-sky away to the northward. Buddington, however, was dead against the

attempt, and Hall, of course, was obliged to follow his advice, so the *Polaris* was allowed to drift southward, until, on September 3, when she had reached lat. $81^{\circ} 38'$, she found herself in a small indentation called Thank God Bay, in which she was made snug for the winter.

Two months later a gloom was cast over the company by the tragic death of Hall. On returning, rather chilled, from a sledge journey, he was unwise enough to descend at once to the cabin and drink hot coffee, though his experience of life in the Polar regions ought to have taught him that it was extremely dangerous to do this without first divesting himself of his furs and allowing his system to be toned up to the high temperature of his cabin. Within a few hours he became seriously ill, and a fortnight later he died. Dr Bessels gave it as his opinion that his death was due to apoplexy.

The command now devolved on Buddington, who showed himself singularly unfitted for his duties. In the first place, he abolished the Sunday services, a step which is always inadvisable, and which, in this case, was absolutely criminal, as the men were quite ill-disciplined enough as it was. In the second place, he developed a taste for sending out exploring parties and calling them back to the ship again for no comprehensible reason, so that no discoveries of any value were made, in spite of the exceptionally favourable situation in which the expedition was then placed. It was, however, after the *Polaris* had been set free and while she was on her way home that he gave the most convincing proof of his incompetence, with the result

that a large portion of his crew came within an ace of absolute disaster. The ship happened to be caught in the ice with which she drifted into Baffin Bay. On October 15 she was severely nipped, whereupon the panic-stricken Buddington promptly cried out, "Throw everything upon the ice." Of course the whole ship was instantly cast into the direst confusion. The sailors hurled everything that they could lay hands on on to the floe, including a bundle which was subsequently found to contain two of Hans Christian's offspring. Men, women, and children leapt after them, and though Tyson did his best to calm them his efforts were not of much avail. While everything was still in confusion and while half the crew were on the ice and the rest on board, the ship suddenly freed herself and flew off before the wind at the rate of ten or eleven knots an hour.

It was not until morning came that the castaways were able to take a serious survey of their situation. They found that they numbered nineteen, among them being two Eskimo women, and Hans Christian's youngest child, Charlie Polaris, which had seen the light of day on board the ship after which he was named while she was lying in winter quarters. The floe on which they were cast away was over a mile in diameter, but though, for the time being, it made a serviceable raft, there was, of course, no knowing when it would split up.

For over six months, that is to say, from the middle of October 1872 to the end of April 1873, the floe drifted steadily south, diminishing in size as it went. The most serious split occurred on March 11, after

which it only measured a hundred yards in length by seventy in breadth. Provisions, too, which were never exactly plentiful—they had started on their adventurous voyage equipped only with eleven and a half bags of bread, fourteen small hams, some cans of meat and soup, a little chocolate and sugar, and 630 pounds of pemmican—became painfully scarce, and had they not been able to eke out their menu with a few dogs which had been thrown on to the ice, and with sundry seals which had been caught during the latter part of their voyage, they would have died of hunger.

Fortunately for them, the floe drifted down into the track of the whalers, and on the last day of April they were picked up by the *Tigress*, of Conception Bay, Newfoundland, which conveyed them safely to St John's.

Of the remainder of the voyage of the *Polaris* herself there is very little to be said. With fourteen men on board, she was driven north to Life Boat Cove, where she was safely anchored. Her crew promptly unloaded her and built a house on shore, where they spent the winter in tolerably comfortable circumstances, being supplied by the Eskimos with all the fresh meat that they required. In the spring they made a couple of boats out of the ship's timbers, in which they set sail for the south on June 3. They were ultimately picked up by the whaler *Ravenscraig* of Dundee.

As has already been indicated, the results of this expedition might have been far greater than was actually the case. The *Polaris*, it is true, penetrated further north than ever ship had penetrated before.

Dr Bessels made many valuable researches into animal and vegetable life in those regions, and it was conclusively shown that Kane's open Polar Sea and the coast-line laid down by Hayes were quite fictitious. But more might easily have been achieved had the expedition been better conducted.

CHAPTER XXI

THE "GERMANIA" AND THE "HANSA"

AS has been seen in the last chapter, Hall was first inspired to enter upon the field of Arctic exploration by the loss of the Franklin expedition, and we have, in consequence, abandoned the true chronological order of events and dealt with his expedition out of its place. We must now hark back to the year 1868, when Dr Petermann, the famous German geographer, fitted out a small ship called the *Germania* for a voyage of discovery along the east coast of Greenland, thus earning for himself the distinction of being the first of his race to send out an expedition to the Polar regions. Dr Petermann himself took no active part in the work, but entrusted the command to Captain Karl Koldewey, an expert in maritime matters, who had studied navigation at the Polytechnic school in Hanover, and physics and astronomy at the University of Göttingen.

His first trip in the *Germania*, in which he was accompanied by a small crew of only eleven men, was not attended by any very remarkable results. Pack-ice frustrated his attempt to coast northward along the shores of Greenland, and compelled him to set his course eastward to the Spitzbergen seas, where he succeeded in reaching the latitude of $81^{\circ} 5'$. He then

turned back down the Hinlopen Strait, and made his way to Bergen, where he arrived on the last day of September.

His second expedition, which sailed in the following year, was much more fully equipped, and on this occasion the *Germania*, a screw-steamer of 140 tons, which was manned by a crew of seventeen officers and men, was accompanied by the *Hansa*, a schooner of 76 $\frac{3}{4}$ tons, commanded by Captain Hegemann, and having fourteen officers and men on board. As it was intended that this expedition should spend a winter within the Arctic circle especial pains were expended upon the commissariat department, and no better provisioned ships had ever set out on a voyage of adventure.

For a while progress was slow, owing to the heavy gales which prevailed during the latter half of the month. They pressed steadily on, however, keeping well in company with one another, and at the beginning of July the knowledge that they were now reaching the higher latitudes was brought home to them by the fact that the sun did not set until 10.15, and that it was possible to read the smallest print at midnight without the aid of artificial light. A few days later, when they were off the coast of Jan Mayen Island, they saw the midnight sun for the first time, and Dr Borgen and Dr Copeland—the latter an Englishman who had studied and worked in Germany—embarked with increased ardour on that series of scientific observations which was the most valuable result of the expedition.

It was soon after this that a misunderstanding occurred which resulted in the two ships being separated for ever. They were sailing along in company,

searching for a passage through the ice which would, it was hoped, extend far away to the north. Koldewey, wishing to consult with Hegemann, signalled to him to come within hail, but he, unfortunately, misunderstood the signal, and, setting more sail, disappeared into the fog before Koldewey could follow him.

Separated from his consort, Hegemann did all that lay in his power to reach Sabine Island, the appointed rendezvous in the event of any accident of this nature. The weather, however, was against him, and, try as he would, he could not succeed in approaching within thirty-five nautical miles of his destination. The *Hansa* now found herself in serious difficulties. For many weeks she had been fighting against the ice, which was rapidly hemming her in on every side, but lack of steam power made it impossible for her either to reach Sabine Island or to force her way through to the landward water which lay along the coast. On September 6 her captain had no choice but to lay her up between two promontories of a large ice-field, and on the following day she was completely frozen in.

It was now, of course, obvious that the crew would have to spend the winter where they were, and they instantly set about building a house of coal bricks, of which they had an ample supply on board. These formed an excellent building material, since they absorbed the damp and kept the warmth in the room, while water and snow made a perfect substitute for mortar. "We only needed," says Hegemann, "to strew finely-powdered snow between the grooves and cracks, pour water upon it, and in ten minutes all was frozen into a strong compact mass." So well did the men

work that the house was finished and provisioned for two months in little more than a week.

They were not much too soon, for before the month was over the fate of the unfortunate *Hansa* was sealed. On October 8 a gale arose which blew violently for several days. On the 18th, the ice began to make itself conspicuous by “thrusting and pressing against the ship. This unpleasant noise lasted until the afternoon. At regular intervals underneath, the ice, like a succession of waves, groaned and cracked, squashed and puffed; now sounding like the banging of doors, now like many human voices raised against one another; and lastly, like a drag on the wheel of a railway engine. The evident immediate cause of this crushing was that our field had turned in drifting, and was now pressed closer to the coast ice. . . . For a time the *Hansa* was spared, though trembling violently. The masts often swayed so much that it seemed as though someone was climbing them.” Worse, however, was to follow, for on the next day the pressure of the ice became so terrible that the deck seams sprang and the bow of the ship was forced upwards seventeen feet. “The rising of the ship,” says Hegemann, “was an extraordinary and awful, yet splendid spectacle, of which the whole crew were witnesses from the ice. In all haste the clothing, nautical instruments, journals, and cards were taken over to the landing bridge. The after part of the ship, unfortunately, would not rise, and therefore the stern post had to bear the most frightful pressure, and the conviction that the ship must soon break up forced itself upon our minds. . . . The first thing to be done was to bring all necessary and useful things from the

tween decks on to the ice—bedding, clothing, more provisions and coal. Silently were all the heavy chests and barrels pushed over the hatchway. First comes the weighty iron galley, then the two stoves are happily hoisted over; their possession ensures us the enjoyment of warm food, the heating of our coal house, and other matters indispensable for a wintering on the floe. At three o'clock the water in the cabin had reached the table, and all movable articles were floating. The fear that we should not have enough fuel made us grasp at every loose piece of wood and throw it on the ice. The sinking of the ship was now almost imperceptible, it must have found support on a tongue of ice or some promontory of our field. There was still a small medicine chest and a few other things, which, in our future position, would be great treasures, such as the cabin-lamp, books, cigars, boxes of games, etc. The snow roof (with which the *Hansa* had been equipped for the winter) and the sails were brought on to the ice; but still all necessary work was not yet accomplished. Round about the ship lay a chaotic mass of heterogeneous articles, and groups of feeble rats struggling with death and trembling with the cold!"

By degrees the crew got things in order and settled down for the winter in their fairly comfortable though not particularly secure abode. Occasionally they had a bad fright. On the afternoon of January 2, for example, as they were resting after dinner, they heard "a scraping, blustering, crackling, sawing, grating, and jarring sound, as if some unhappy ghost was wandering under our floe. Perplexed, we all jumped up and went out; we thought that our store-house had fallen in. Some of

the sailors, going in front with the lamp, carefully searched the path to it. But in whatever direction the light fell on the sparkling and glittering ice-walls we saw nothing. Immovable hung the rigid icicles, often a foot long; evidently nothing was amiss here. We rummaged in the snow path before the house. Although completely snowed up (indeed, the whole house was buried more than a foot deep in ice), we all rushed out, but, of course, we could not see more than the steps, nor hear anything but the howling of the storm. Still, between whiles, we could detect the same rubbing and grinding. For a change we laid ourselves flat down, with our ears to the floor, and could then hear a rustling like the singing of ice when closely jammed, and as if water was running under our great floe. There could be no doubt that it stood in great danger of being smashed to pieces, either from drifting over sunken rocks and bursting up, or breaking over the ice-border; perhaps both at once. We packed our furs and filled our knapsacks with provisions. Our position, if the floe should be destroyed, seemed hopeless.”

Next morning they found that huge masses of the floe in the neighbourhood of the house had broken off, and, on the following day, when the storm had cleared off and they were able to take a careful survey of the situation, they discovered, to their horror, that it was not half its former size. The distance from the house to the edge of the ice, which was once 500 paces, was now only 200; except on one side, where the distance, formerly 3000 paces, was now diminished to 1000, while the diameter of the floe, which, before the storm was two nautical miles, was now barely one. The worst, how-

ever, was yet to come, for on January 11 splits appeared in the immediate neighbourhood of the house, which so reduced the floe that it soon measured only 150 feet in diameter, and on this frail raft the unfortunate crew experienced one of the most terrific storms that they had encountered. By a miracle they escaped with their lives, and by the beginning of February their trials, which they had borne with marvellous patience, were practically over.

During the whole of this time they had been drifting steadily south within sight of the barren shore of Greenland, which, unfortunately, the ice had never allowed them to reach. On May 7, however, the sea cleared, and it need hardly be said that they seized gladly on the opportunity of taking to their boats, in which they reached Friedrichsthal on June 7. There they received a ready welcome from the Moravian missionaries, and eventually secured a passage home from Julianshaab, a seaport on the west coast of South Greenland.

In the meanwhile, Koldewey, after waiting some time for the *Hansa*, was obliged by the approach of winter to find a harbour for his ship off Pendulum Islands. In the spring he went out on a sledging expedition with Payer, during the course of which he reached lat. $77^{\circ} 01'$, the highest point attained up till then on the east coast of Greenland. While sailing home in the summer, he discovered the magnificent Franz Josef Fiord, at the head of which Mount Petermann rears its head to a height of at least 12,000 feet above the sea.

CHAPTER XXII

THE VOYAGE OF THE "TEGETTHOFF"

MANY routes to the North Pole had now been tried and found wanting. Expeditions had started out by Behring Strait, through Smith Sound, up the eastern coast of Greenland and from Spitzbergen, but they had one and all been frustrated by those great Arctic currents, which, rushing down from the Polar basin, carried with them such quantities of ice that real progress towards the Pole was practically impossible. There still remained one route, however, which had scarcely been tried at all, namely that which lay round the north-east shores of Nova Zembla. Many noted geographers held that the Gulf Stream did not disappear at the North Cape, and that by following its warmer waters it might be possible to avoid the Arctic currents and the difficulties which followed in their train. It was with a view to testing this theory that the Austrian expedition of 1872-74 set out in the *Tegetthoff*, under the joint command of Lieutenant Carl Weyprecht, to whom was entrusted all matters connected with navigation, and Lieutenant Julius Payer, who was to be responsible for the conduct of the sledging operations.

In June 1871 Weyprecht and Payer sailed in the *Isbjörn* on a preliminary excursion to spy out the land,

or rather, perhaps, the sea, and, the result of their observations being entirely satisfactory, it was definitely decided that they should adventure in that direction in the following year. The *Tegetthoff*, a steamer of 220 tons burden, was accordingly put in a state of thorough repair and fitted out for two years and a half. Her crew numbered twenty-two, so that, with her commanders, she carried twenty-four souls, as well as eight dogs.

The expedition sailed from Tromsö on July 14, and eleven days later ice was sighted. At first it afforded them no serious difficulties, for the *Tegetthoff* was enabled by her steam power to charge the floes and so to force her way through those round which she could not sail. On August 20, however, she was brought to a dead stop by a barrier of ice in lat. $76^{\circ} 22'$ N., long. $63^{\circ} 3'$ E. "Ominous were the events of that day," says Payer, "for immediately after we had made the *Tegetthoff* fast to that floe, the ice closed in upon us from all sides, and we became close prisoners in its grasp. No water was to be seen around us, and never again were we destined to see our vessel in water. . . . We were, in fact, no longer discoverers, but passengers against our will on the ice. From day to day we hoped for the hour of our deliverance! At first we expected it hourly, then daily, then from week to week; then at the seasons of the year and changes of the weather, then in the chances of new years! But that hour never came."

The *Tegetthoff*, firmly fixed on her floe, now became the sport of the winds, for in that sea it is the wind that controls the ice-movements. By October 12 she had

travelled so far northward that Nova Zembla had completely disappeared from view. On the next day a great excitement took place, for the floe burst right under the ship. "Rushing on deck," says Payer, "we discovered that we were surrounded and squeezed by the ice; the after-part of the ship was already nipped and pressed, and the rudder, which was the first to encounter its assault, shook and groaned; but as its great weight did not admit of its being shipped, we were content to lash it firmly. We next sprang on the ice, the tossing, tremulous motion of which literally filled the air with noises, as of shrieks and howls, and we quickly got on board all the materials which were lying on the floe, and bound the fissures of the ice hastily together by ice-anchors and cables. . . . But, just as in the risings of a people, the wave of revolt spreads on every side, so now the ice uprose against us. Mountains threateningly reared themselves from out the level fields of ice, and the low groans which issued from its depths grew into a deep rumbling sound, and at last rose into a furious howl as of myriads of voices. Noise and confusion reigned supreme, and step by step destruction drew nigh in the crashing together of the fields of ice. Our floe was now crushed, and its blocks, piled up into mountains, drove hither and thither. Here they towered fathoms high above the ship, and forced the projecting timbers of massive oak, as if in mockery of their purpose, against the hull of the vessel; there masses of ice fell down as into an abyss under the ship, to be engulfed in the rushing waters, so that the quantity of ice beneath the ship was continually increased, and at last it began to raise her quite above

the level of the sea. About 11.30 in the forenoon, according to our usual custom, a portion of the Bible was read on deck, and this day, quite accidentally, the portion read was the history of Joshua; but if in his day the sun stood still, it was more than the ice showed any inclination to do. . . . In all haste we began to make ready to abandon the ship, in case it should be crushed, a fate which seemed inevitable, if she were not sufficiently raised through the pressure of the ice. At 12.30 the pressure reached a frightful height, every part of the vessel strained and groaned; the crew, who had been sent down to dine, rushed on deck. The *Tegetthoff* had heeled over on her side, and huge pillars of ice threatened to precipitate themselves upon her. But the pressure abated, and the ship righted herself; and about one o'clock, when the danger was in some degree over, the crew went below to dine. But again a strain was felt through the vessel, everything which hung freely began to oscillate violently, and all hastened on deck, some with the unfinished dinner in their hands, others stuffing it into their pockets."

Instantly the last preparations were made for leaving the ship—"whither no one pretended to know: for not a fragment of the ice around us had remained whole; nowhere could the eye discover a still perfect and uninjured floe, to serve as a place of refuge, as a vast floe had before been to the crew of the *Hansa*. Nay, not a block, not a table of ice was at rest, all shapes and sizes of it were in active motion, some turning and twisting, none on the level. A sledge would at once have been swallowed up."

The party on the *Tegetthoff* remained for the whole

of the winter on the brink of death. When summer came round it brought with it hopes of release, but day after day passed by and still the floe on which the ship was fixed showed no signs of freeing her from its grasp. In July 1873 an attempt was made to measure the thickness of the ice by means of a borer; after twenty-seven feet had been penetrated the attempt had to be abandoned. In August the chances of release began to lessen considerably, and the bitter thought was beginning to assail the officers and crew that they would be obliged to return home without making a single discovery when, on the 30th of the month, a sudden and unexpected sight infused new life into them. "About midday," says Payer, "as we were leaning on the bulwarks of the ship and scanning the gliding mists, through which the rays of the sun broke ever and anon, a wall of mist, lifting itself up suddenly, revealed to us afar off in the north-west the outlines of bold rocks, which in a few minutes seemed to grow into a radiant Alpine land! At first we all stood transfixed and hardly believing what we saw. Then carried away by the reality of our good fortune, we burst into shouts of joy, 'Land, land, land, at last!' There was now not a sick man on board the *Tegetthoff*. The news of the discovery spread in an instant. Everyone rushed on deck to convince himself, with his own eyes, that the expedition was not, after all, a failure—there before us lay the prize that could not be snatched from us. Yet not by our own action, but through the happy caprice of our floe and as in a dream had we won it; but when we thought of the floe, drifting without intermission, we felt with redoubled pain that we were at the mercy of

its movements. As yet we had secured no winter harbour from which the exploration of the strange land could be successfully undertaken. For the present, too, it was not within the verge of possibility to reach and visit it. If we had left the floe, we should have been cut off and lost. It was only under the influence of the first excitement that we made a rush over our ice-field, although we knew that numberless fissures made it impossible to reach the land. But, difficulties notwithstanding, when we ran to the edge of our floe, we beheld from a ridge of ice the mountains and glaciers of the mysterious land."

With all due pomp and circumstance they named their new discovery Franz Josef Land, drinking the health of their Emperor as they did so. Their jubilation, however, was destined to be short-lived, for almost immediately a northerly wind arose which drove their floe many miles to the south, and Franz Josef Land, though still very dear to memory, was completely lost to sight. When next they found themselves in its neighbourhood, moreover, an event which occurred towards the end of September, their sensations were less pleasurable, for storms were churning up the ice in a most terrifying manner, and they were in imminent danger of being wrecked upon a shore which, though they viewed it with eyes of pride, looked, as they had to admit, distinctly inhospitable. By the 1st of November, however, the ice had quietened down, and Payer came to the conclusion that he might safely attempt to effect a landing. The way was difficult, lying as it did over masses of broken ice which included a rampart fifty feet high, but the men made light of



A BEAR HUNT

such obstacles, and it was a proud moment for them when they were able to set foot on land which had probably never been trodden by a human being before.

They found that the new country consisted of two main masses. That on which they had landed they called Wilczek Land, and the other they named Zichy Land, while the sound which separated them they christened Austria Sound. It was a bleak and desolate land enough, clothed for the most part in perpetual snow, and absolutely devoid of any signs of habitation. The vegetation was so scanty that musk-oxen or reindeer could not have supported life there, and the place seemed to be given over entirely to Polar bears, foxes, and a few migratory birds. Everything, however, depends on the point of view, and it certainly seemed Paradise to the crew of the *Tegetthoff*. Fortunately for them the ice soon became firmer, and they were able to explore the new land with less fear of their line of retreat being cut off. During the early spring Payer mapped out several of the islands of which he found Franz Josef Land to consist, and succeeded in penetrating as far north as Cape Fligely, the highest point attained in the old world up till then. He also added several new lands to the chart, which have been subsequently shown to be non-existent, among them being King Oscar and Petermann Lands.

It was, of course, perfectly obvious that the ship must be abandoned, and during the winter preparations were made for taking that step as soon as spring came round. The objective was Nova Zembla, where a depot of provisions had been established for them

to meet eventualities. They had no need to make use of that depot, however, for while passing Cape Britwin, they fell in with a Russian schooner, the *Nikolai*, which took them on board and brought them safely back to Europe in September 1874.

CHAPTER XXIII

NARES AND SMITH SOUND

AFTER the return of Sir Edward Belcher's expedition in 1854 the British Government was content to rest on its laurels, so far as Arctic research was concerned, and to leave the field entirely to Germans, Austrians, Americans, and to such private individuals as cared to undertake the very heavy cost of equipping an expedition for the Polar regions. In the year 1874, however, it once again awoke to a sense of its responsibilities. There was still about the Pole a tract of some two and a half million square miles which had never been trodden by the foot of a civilised man, and it was felt by men of science that no satisfactory data concerning the cause and the track of storms, together with the thousand and one other things concerning the sea which commercial nations wish to know, could be obtained unless the Polar seas became rather less of a sealed book.

No time was lost in setting about the preparations, and in April of the following year two ships were commissioned for the great expedition of 1875-76, and the command was entrusted to Captain George S. Nares. The ships in question were the *Alert*, a steam sloop of 751 tons and 100 horse-power, and the *Discovery*, a steamer of 556 tons and 96 horse-power, which, under

the name of the *Bloodhound* had already seen service as a whaler. They were fitted with all the most modern appliances, and were provisioned for three years, while among the officers of the expedition were Albert H. Markham, commander of the *Alert*, Pelham Aldrich, who served as a lieutenant on the same ship, and Henry F. Stevenson, who was appointed captain of the *Discovery*.

Accompanied by the store ship *Valorous*, from which they were to take additional supplies at Godhaven, the two ships set sail from Portsmouth on May 29, 1875. The passage across the Atlantic was long and boisterous, but they eventually arrived at Godhaven on July 6, where they parted company with the *Valorous* after taking on board everything in the way of provisions that they needed as well as twenty-four Greenland dogs. At Ritenbenk they shipped more dogs, together with two drivers, Petersen, the Dane who had served under Hayes, and Frederick, an Eskimo. At Proven they touched again, to pick up our old friend Hans Christian, whose family, undeterred by their previous experiences on the ice-floe, once more insisted on accompanying him. They reached Port Foulke on July 28, and had the good fortune to find the entrance to Smith Sound entirely free from ice. They were not, indeed, delayed until they reached Payer Harbour, a little south of Cape Sabine, where they were beset in the ice for several days, during which time Stevenson occupied himself with exploring Foulke Fiord, while Nares visited Littleton Island and Life Boat Cove and examined the *cache* left behind by the *Polaris*.

The journey northward was pursued with very vary-

ing fortunes. The ice was exceedingly bad, and when the ships were not actually beset in it, they were occupied in charging their way through it. Little by little, however, they made their way up the channel, caching large stores of provisions as they went, among the chief being a depot of 3600 rations on the Carey Islands, another depot of the same size at Cape Hawks, and one of 1000 rations at Cape Lincoln.

But ice was not the only difficulty with which Nares had to contend, for Hayes' chart was a source of perpetual annoyance to him, and a great part of his time was spent in correcting its errors. Cape Frazer was placed eight miles and Scoresby Bay twenty miles too far north, and the rest of the western coast was so badly delineated that Nares pathetically remarked that it was often difficult to know exactly where he was.

Hugging the western shore and taking advantage of every channel that opened near the ship, he succeeded in reaching Lady Franklin Bay, on the other side of which he found a land-locked inlet; this he named Discovery Harbour, and in it he decided to leave his companion ship while he himself pushed on in the *Alert*.

As he ascended the strait he observed that the character of the ice changed rapidly. Off Cape Sabine the biggest floes were only eight or ten feet thick; off Cape Fraser their thickness increased to twenty feet, and the ice was obviously older, "but," he says, "up to the present time, when the main pack consisted entirely of heavy ice, I had failed to observe that, instead of approaching a region favoured with open water and a warm climate, we were gradually nearing a sea where

the ice was of a totally different formation to what we had ever before experienced, that few Arctic navigators had met, and only one battled with successfully; that in reality we must be approaching the same sea which gives birth to the heavy ice met with off the coast of America by Collinson and M'Clure, and which the latter in 1851 succeeded in navigating through in a sailing vessel for upwards of 100 miles, . . . which Sir Edward Parry met with in the same channel in 1820, . . . which, passing onwards to the eastward from Melville Strait down M'Clintock Channel, beset, and never afterwards released, the *Erebus* and *Terror* under Sir John Franklin and Captain Crozier; and which, intermixed with light Spitzbergen ice, is constantly streaming to the southward along the eastern shore of Greenland, and there destroyed the *Hansa* of the last German Arctic expedition." In other words, Nares was in the middle of the ice formed in the Polar Sea, now known as Palæocrystic, and was the first man really to understand its character.

With some difficulty, the *Alert* succeeded in making her way as far as Floeberg Reach, in lat. 82° 25' N., long. 62° W., the highest point yet attained by a ship. Here Nares determined to spend the winter, for, though the situation seemed at first sight to be rather exposed, it was well protected by a fringe of heavy floes which were grounded in eight to twelve fathoms of water. No land was to be seen to the northward, and Nares was forced to come to the conclusion that, though he had reached the shores of the Arctic Ocean, it was the very reverse of that open Polar sea which he had hoped to find.

On September 16 the ship was effectually frozen in for the winter, and ten days later Captain Markham, Lieutenant Parr, and Lieutenant May set off on a sledging expedition with the object of establishing depots of provisions as far north as they could. They accomplished their work well, but at terrible cost, for seven men and one officer returned to the ship badly frost-bitten, and in three cases amputations were necessary. At the same time Pelham Aldrich went out on an exploring trip in which he succeeded in reaching Parry's latitude of $82^{\circ} 48' N$.

The winter was fairly fine, but bitterly cold—the coldest, in fact, on record. The *Alert* experienced a mean temperature for five days and nine hours of 66.29° below zero, while for two separate periods of fifteen days each the mercury remained frozen. In the middle of March Lieutenants Egerton and Rawson attempted to open up communications with the *Discovery*, but the attempt ended with disaster, for Petersen, who accompanied them, was taken ill on the journey, and the whole party had to return. The two officers made the most heroic exertions to bring him back to health, depriving themselves of their own warm clothing and suffering severely in consequence. Their efforts were, however, of no avail, for Petersen was found to be so badly frost-bitten that both his feet had to be amputated, and three months later he died of exhaustion. Setting out again, Rawson and Egerton, accompanied by two sailors, reached the *Discovery*, and found that her crew had passed a comfortable winter, though one man was down with scurvy.

As soon as April came round Nares began the serious work of the spring by sending out two great sledge parties, one of which, under Commander Markham, was to push as far north as possible, while the other, under Lieutenant Aldrich, was to explore the northern shores of Grinnell Land.

Having been accompanied by a supporting party as far as Cape Henry, Markham set out over the Polar Sea on April 10, 1876. Fearing that they might chance upon an open sea, the party took with it two boats, which added greatly to their labours, making it necessary for them to cover every mile of their journey four times. Their way, moreover, lay in peculiarly unpleasant places, for the ice-field over which they had to travel was like a frozen ocean, the depressions between the waves being filled with snow and broken pack-ice. One of the boats was soon abandoned, but the men dragged the other as far as lat. $83^{\circ} 20'$, the highest point attained up to that time.

The homeward journey was even more trying, for scurvy had broken out among the men, five out of the seventeen had to be placed on the sledges, and many of the others could barely drag themselves over the ice. It soon became obvious that they could not reach the ship without assistance, so Lieutenant Parr gallantly volunteered to set out by himself, and performed the truly astonishing feat of covering the thirty miles which lay between his starting-point and the ship in twenty-four hours. The help that he brought back was only just in time, for one man died on the way, while eleven of the others had to be dragged to the ship on sledges.

In many ways Markham's journey was one of the most extraordinary on record. Instead of advancing at a steady walk, more than half of each day was spent by the whole party facing the sledge and dragging it forward a few feet at a time. The maximum rate of advance was $2\frac{3}{4}$ miles a day, the mean rate being $1\frac{1}{4}$, while, though the distance from the ship to their farthest point was only 73 miles, on the outward and homeward journeys they actually covered no less than 521 miles.

Aldrich's expedition also suffered severely from scurvy, but succeeded, nevertheless, in doing excellent work, by exploring the northern shores of Grinnell Land for 220 miles, that is to say, as far as lat. $82^{\circ} 16'$ N., 86° W. Fortunately Nares, becoming anxious about Aldrich's safety, sent out Lieutenant May and two sailors to relieve him. It was as well that he did so, for he found that only Aldrich and one man were in a fit condition to haul, and the whole party would probably have perished if it had not been for his timely aid.

Lieutenant Beaumont's expedition from the *Discovery* also very nearly ended in disaster from the same cause. He was especially detailed to explore the coast of Greenland to the north, and so well did he fulfil his mission that he far outdistanced all his predecessors, and succeeded in reaching lat. $82^{\circ} 20'$ N., 51° W. The homeward journey was a long and stern fight against disease, which seemed likely to end in disaster when, on reaching Robeson Channel, he found the ice too rotten to permit them to cross to the *Alert*. Fortunately Rawson and Dr Coppinger arrived just in time to save all of the party but two.

There were now no fewer than thirty-six cases of scurvy on the *Alert* alone, and Nares decided to return as soon as he could break out of winter quarters. He was released at the end of July, and in October both ships reached England in safety, after a remarkably successful voyage, in which great tracts of entirely new country had been opened up.

CHAPTER XXIV

THE GREELY TRAGEDY

VALUABLE as were the immediate results of Lieutenant Charles Weyprecht's voyage in the *Tegetthoff*, its indirect results were greater still, for he came back from his adventurous journey full of plans for revolutionising the manner in which Arctic exploration had been conducted. Up to that time each nation or each group of individuals had gone on its own way, practically regardless of the scientific or geographic work of the others, and there had been no attempt to solve the mysteries of the Arctic regions by concerted action. In an address delivered before the German Scientific and Medical Association of Gratz in 1875, however, Weyprecht suggested that the chief of the nations engaged in Arctic research should establish a number of stations round the Pole, whereat a series of simultaneous observations should be made. As a result of this address, Bismarck appointed a commission of leading men of science to consider Weyprecht's proposal, and this commission came to the conclusion that the work would be of the greatest value, and that the united action of several nations was essential to its success. Out of these beginnings gradually grew the International Circumpolar Conference of 1879. Its

first meeting, which was held at Hamburg, was principally devoted to the discussion of business, and eleven nations promised their support. The second conference, which met at Berne in August 1880, decided definitely on the plan of action to be employed, and adopted a scheme of observations, obligatory and optional, for use at the fifteen stations which it was proposed to establish.

Of the fifteen stations ultimately established, Denmark, Germany, Russia and the United States occupied two each, while Austria-Hungary, Finland, France, Great Britain, Holland, Norway and Sweden established one each. In addition, thirty-four permanent observatories promised their co-operation, with the result that during several succeeding years important observations were being simultaneously conducted by competent men of science at forty-nine different stations, all of them either actually in or in the immediate neighbourhood of the Polar regions.

With the work of most of these expeditions we need not concern ourselves at all. It was of a purely scientific nature, and the curious may find it all set forth in the thirty-one quarto volumes of the International Polar Scientific Publications, a set which contains by far the greatest collection of scientific Arctic data extant. The only party of the fifteen which we need follow, indeed, is that which America sent out, under the command of Lieutenant A. W. Greely, to establish a station in Lady Franklin Bay, on the east coast of Grinnell Land, in the district visited by Nares in 1875.

The plan of the expedition, briefly put, was as

follows: Greely, who was a lieutenant in the Signalling Department of the United States Army, was to sail on the *Proteus*, a sealer of 467 tons, with a party of twenty-five, in the spring of 1881. The *Proteus* was to make direct for Lady Franklin Bay, where he was to land the expedition and then return home. It was arranged that a vessel should visit the station with supplies in 1882 and again in 1883. In the event of her being prevented from reaching the headquarters of the party, she was to *cache* quantities of supplies on the east coast of Grinnell Land, and to establish a depot on Littleton Island. If no vessel succeeded in reaching Lady Franklin Bay in 1882, the ship sent out in 1883 was to remain in Smith Sound so long as the conditions permitted, and, before leaving, was to land a party with everything necessary for a winter's stay on Littleton Island. It was hoped that thus the safety of Greely and his men would be assured.

Unfortunately, it seems that the cabinet minister who was responsible for the equipment of the party was not too well disposed towards it. The funds placed at its disposal were quite inadequate, with the result that Greely was obliged to exercise the most rigid economy in purchasing his stores, while, owing to a number of vexatious and quite unnecessary delays in the delivery of papers and so forth, he had to rush through his final preparations in an inconveniently short space of time. Eventually, however, the equipment was completed on an adequate, but by no means liberal scale, and the *Proteus* set sail from St John's, Newfoundland, on July 7, 1881. It was not until she reached Hall Basin, and when she was actually in sight

of her destination, that she was first delayed by ice. Fortunately, however, she was equipped with steam, so that she soon charged her way through the barrier and landed the members of the expedition in Discovery Harbour, the place finally selected for their headquarters.

Here they found themselves in a delightful spot. Dryas, saxefrage, sedges, grasses and buttercups clothed the hill slopes and river banks, and there was animal life in abundance. No sooner were they ashore than the men set about building their quarters, a work which they executed with such dispatch that in a fortnight they had made themselves an exceedingly comfortable house, which they named Fort Conger. Unfortunately, even at this early stage of the proceedings, the party does not seem to have been on harmonious terms, and it appears that Greely, able officer though he was, had an unfortunate way of alienating the sympathy of his followers. The first signs of this friction appeared when, eight days after the landing, the *Proteus* sailed for home, and took with her one or two volunteers who had intended to take part in the work of the expedition but found it impossible to stay. When she was on the point of starting again, Lieutenant Kisingbury, one of the regular officers of the expedition, expressed himself dissatisfied with the manner in which affairs were being conducted and asked permission to return. This was granted him, but he missed the ship and was obliged to return to the station. From that time onward Greely hardly spoke to him, and though he did splendid work as a huntsman for the party and

showed himself anxious to forward its interests in every possible way, he was never asked to resume his official connection with it.

The earlier days of their stay at Fort Conger were spent in making short sledge expeditions and in laying down depots of provisions at Cape Beechey and Cape Murchison. Under the direction of the astronomer Israel, too, scientific investigations were pursued with the utmost zeal, and many exceedingly valuable results were obtained. As soon as spring came round again sledging expeditions were sent out in all directions, and some members of the party had rather curious experiences. For example, Pavy, the doctor of the mission, and a small party, went off on a voyage of discovery in the direction of the winter quarters of the *Alert*, which they reached in safety. Eight days later, however, they were unwise enough to take refuge from a storm on an iceberg. To their horror and alarm, the gale separated their berg from the main pack and sent it sailing towards the north. They had reached lat. $82^{\circ} 56' N.$, and were beginning to wonder whether they would ever return again when, by good luck, their raft drifted towards the shore which they succeeded in reaching, but only with great difficulty.

While Pavy and his companions were indulging in their perilous voyage, Lieutenant J. B. Lockwood, one of the most indefatigable members of the mission, was making an extraordinary journey up the west coast of Greenland. He left Fort Conger on April 3 with orders to explore the coast near Cape Britannia and thence to press on in any direction which he thought

fit. The ice was rough, the gales were violent, and the cold was intense, the thermometer sometimes sinking as low as 81° below freezing point. In spite of these difficulties, however, he pushed rapidly on, and on April 27 he reached Cape Bryant. Thence he sent back all of his men except two, Sergeant Brainard and Christiansen, and with these companions he made his way forward with renewed ardour. In the course of his journey he crossed Sherard Osborn Fiord, passed the highest point reached by Beaumont in 1876, doubled Cape May, climbed Cape Britannia, and, on May 13, reached Lockwood Island, the highest point attained by any Arctic explorer up to that time ($83^{\circ} 24' N. 42^{\circ} 45' W.$). Some miles to the north he saw Cape Washington, the most northern known land, but he was unable to determine whether or not there was land beyond it. Lockwood and his companions then set out on the return journey, reaching Fort Conger without misadventure on June 1.

The summer was very warm indeed. The snow melted and uncovered traces of Eskimo habitations, while some of the party actually saw butterflies and bumblebees. But of the ship which they were expecting there was not a trace. As, however, they were amply provisioned for another winter there was no cause for immediate alarm.

In the spring of 1883 Lockwood attempted to repeat his exploit of the previous year, but the conditions were against him, and he had to return without fulfilling his object. He immediately set out to assist Greely in his exploration of the interior of Grinnell Land, a work which had been begun during the pre-

vious summer. The results of their efforts showed that that country is a positive Paradise compared with most Arctic lands. It is intersected by rivers and long fertile valleys in which browsed herds of musk-oxen, while an enormous glacial lake, some five hundred square miles in area and fed by glaciers, which they named Lake Hazen, was one of its most remarkable features.

August brought with it no sign of the expected ship, and Greely now saw that he must set about his homeward journey in his boats without delay. Accordingly, on August 9, he and his companions started away from Fort Conger in their steam launch, two boats and a dingy, taking with them every scrap of food that they could stow away into the small accommodation at their command. The voyage was difficult and dangerous, for the heavy spring tides, rising twenty-five feet and more, combined with violent gales, kept the ice pack in constant motion against the precipitous and rock-bound coast. What with the delays caused by the weather and the constant stoppages which they were obliged to make in order to pick up every *cache*, however small, that had been laid down during the years of their stay at Discovery Harbour, it took them sixteen days to cover the two hundred miles which lay between their starting-place and Cape Hawks. Worse, however, was to come, for off Bache Island the boats were frozen into the ice so securely that they had no choice but to abandon them, and so adverse were the conditions that nineteen days were spent in struggling to the shore which was only thirteen miles distant when they started for it.

At last, however, they succeeded in effecting a land-

ing between Cape Sabine and Cape Isabella, but they were now really in little better case than before. They were all in good health, it is true, and they had saved their instruments and the valuable records of their doings, but they were desperately short of provisions, and the shore on which they found themselves was inhospitable in the last degree. However, there was nothing for it but to make the best of a bad business. Accordingly, some set about hunting, some started the erection of winter quarters, while others went out in search of cairns and records. It was on Cape Sabine that one of these parties found a record which told them why the *Rroteus* had not put in an appearance at Lady Franklin Sound. While on her way thither in July 1883, the record said, she had been crushed by the ice north of the Cape, and rendered absolutely useless for further service. She had, however, left a store of provisions there, and her commander, Lieutenant E. A. Garlington, left a message there to say that he would attempt to join the U.S.S. *Yantic* with all possible rapidity with a view to obtaining immediate succour for the distressed party. Unfortunately for them, the *Yantic*, which was under orders to repair to Littleton Island, was only a fair-weather vessel, and could render them no assistance whatever.

Greely repaired immediately to Cape Sabine, and erected winter quarters on Bedford Pim Island. The *cache* spoken of by Garlington was there, it is true, but it was miserably inadequate, and the party found themselves face to face with the terrible necessity of passing a long Arctic winter poorly housed, inadequately clad, and with only forty days' rations. From that time

Greely's diary is one long tale of horror. Hunger, starvation and scurvy played fearful havoc among the men, and their condition soon became deplorable. Up till the beginning of April the expedition had only lost one of its members, but the 5th of that month saw the beginning of the end, and from that day onwards deaths were terribly frequent. Lockwood, Kislingbury, Israel, the astronomer, and Dr Pavy all sickened and died within a few weeks of one another; Rice, the photographer, perished while attempting to take up a cache; Jens died while out hunting; while Henry, who acted as cook, had to be executed for stealing from the small store of provisions left to the famine-stricken men.

At last, on June 22, 1884, Greely was astonished to hear the sound of a steamer's whistle. He was too weak to leave the hut himself, but one of the few survivors of his party brought in news of the arrival of two relief ships, the *Thetis* and the *Bear*, under the command of Captain W. S. Schley and Commander H. H. Emory. No time was lost in taking Greely and his men on board, and they were conveyed back to America forthwith, one more death taking place on the voyage.

We now come to a part of the story which is omitted from most histories of this expedition, but which ought to be given in full, terrible though it unquestionably is. We have already mentioned that the Secretary for War of that day, Mr Robert T. Lincoln, was not too well disposed towards the expedition from the start, and that he put many difficulties in its way before it left American shores. Incredible though it may seem, it was in the same spirit that the authorities approached

the relief expeditions, and there can be no question whatever that most, if not all, of Greely's men could have been saved if the original plans had been properly carried out.

As we have already seen, in the summer of 1883 the *Proteus* started off, accompanied by the *Yantic*, under Captain Wilde, with orders either to bring Greely home or to establish an ample depot of provisions on Littleton Island. The command of the *Proteus* was entrusted to Captain Pike, while Lieutenant Garlington, who had volunteered for the service, was placed at the head of the entire expedition. The initial mistake was made when the *Yantic* was allowed to sail with her boilers in a very poor state of repair, necessitating an early visit to a Greenland port. Consequently, she was unable to accompany the *Proteus* far north, as was originally designed. Wilde, however, was given orders to join Garlington at Littleton Island with as little delay as possible.

Near the entrance to Smith Sound the *Proteus* was stopped by ice. Garlington, however, while prospecting from a hill not far from Payer Harbour, saw a lead of open water through what had hitherto been solid ice, and, returning to the ship, he ordered Pike to proceed up it. Pike, who had had great experience of ice, said that he did not like the look of it and would prefer to wait a few days, as the season was still very early. Garlington, however, insisted, and Pike had, of course, no choice but to obey his orders. The result was that the *Proteus* was caught in the ice and sank. Before the ship went down, some 3000 rations or more were landed on the floe, but, a portion of the ice de-

taching itself, seven or eight hundred were allowed to drift away, together with a number of dogs, Garlington refusing to make an effort to save them. Of the 2000 rations or more taken eventually to Cape Sabine, Garlington only left 500 for Greely, loading the boats with the remainder and reserving them for his own use.

He then proceeded to Littleton Island. Here there was no lack of game, and, as he had plenty of ammunition, he could easily have formed a splendid depot of provisions for the explorers whom he must have known would be in dire straits during the winter. He knew this, and he knew that the *Yantic* was bound by his orders to join him at Littleton Island, yet nothing would suit him but to start off at once in his boats to meet her. Lieutenant Colwell offered to go off for this purpose in the whaler while Garlington laid in a store of provisions; the offer was rejected. Pike urged him to wait for a few days as there could be no doubt that the *Yantic* would cross Melville Bay in safety; the advice was rejected. Events showed that Pike was right, for the *Yantic* reached Littleton Island three days after Garlington and his men had left it, having, of course, missed them on the way. Wilde now had no choice but to put about and look for the crew of the *Proteus*, and he eventually succeeded in finding them on the coast of Greenland.

Now comes the most astonishing part of the whole story. No sooner was Garlington on board than he gave Wilde orders to sail straight for home, although the navigable season was not yet half over, and although he had left behind a message for Greely reporting the loss of the *Proteus*, stating that he was

rejoining the *Yantic*, and adding that "everything in the power of man" should be done to rescue him.

The *Yantic* made a good passage home, and even then it would have been easy to equip and send out a special vessel to Cape Sabine, for whaling captains were all agreed that a boat leaving New York as late as September 19 could reach Cape Sabine in safety. General Hazen, the chief signalling-officer, entreated Lincoln to purchase and dispatch a vessel at once; nothing was done. Lieutenant Melville, of whom we shall have cause to say more in connection with the *Jeannette* expedition, offered to take a party there himself; his offer was not accepted, and shortly afterwards Lincoln expressed his conviction that it was now too late. As events proved, Melville Bay was navigable that year for forty-five days after that "too late" was uttered, and many of Greely's companions paid for the mistake with their lives.

This story is one of the very few dark spots on the history of Arctic exploration. No one, of course, would dream of accusing either Lieutenant Garlington or the Secretary for War of wilfully sacrificing the lives of their fellow men, but it is extraordinary that, while they knew that there was the barest likelihood of Greely and his men starving to death on a barren and inhospitable shore where there was no chance of their obtaining food, they should have neglected to use their utmost effort to save them.

CHAPTER XXV

NORDENSKIÖLD AND HIS WORK

OF all the men who have added to the world's scientific knowledge of the Polar regions there is none who has made his name more famous than Adolph Erik Nordenskiöld. The data that he collected, and the discoveries that he made on his many voyages to the Arctic world have proved invaluable, and his explorations have not merely been rich in scientific and geographical results, but they have also benefited the mercantile world by opening up new fields for enterprise, and proving the practicability of routes which had always been regarded as absolutely hopeless.

Nordenskiöld was born at Helsingfors, the capital of Finland, on Nov. 18, 1832. His father was a well-known naturalist, and the head of the mining department of Finland, and it was to his early training that the son owed his first instruction in that particular branch of science of which he was destined to become one of the leading lights. Honours crowded thickly upon him, and he was already becoming one of the most noted mineralogists in Sweden when, at the age of twenty-six, he joined Professor Torrell's expedition to Spitzbergen. Neither with this expedition nor with that of 1861, in which he served under the same leader, need we concern ourselves. In 1864, however, that is

to say, in the year after Spitzbergen had been circumnavigated for the first time by the Norwegian Carlsen, the illness of Professor Chydenius, who was to have acted as leader of the Swedish expedition of that year, left the command of the expedition open. It was offered to Nordenskiöld, who, of course, accepted it. This party was sent out with a view not only to pursuing scientific researches in Spitzbergen, but also to exploring the unknown regions to the north of that island. The first part of his task Nordenskiöld fulfilled admirably, among other things rediscovering Wiche Land, which had not been sighted since Thomas Edge chanced upon it in 1617; he was only prevented from fulfilling the second by the fact that he fell in with seven boatloads of shipwrecked walrus hunters to whom, of course, he had to give succour. This placed so severe a strain upon his commissariat department that he was obliged to desist from his original intention.

To Nordenskiöld's deep regret, the Swedish Government now came to the conclusion that it had done enough in the way of Arctic research for the present. The explorer, however, had acquired a taste for Arctic travel, and he was by no means inclined to give in without a murmur. Accordingly, he approached Count Ehrensvärd, the Governor of Gothenburg, upon the subject, and through his kind offices a fund was raised by such mercantile princes as Dickson, Ekman and Carnegie, with the result that, in 1868, he was able to depart upon an expedition during the course of which he succeeded in attaining to a higher point than ever explorer in the old world had reached in a ship.

On his return Oscar Dickson, who proved a veritable

Maecenas to Nordenskiöld, asked him if he would not like to continue his researches in that direction, and it need hardly be said that his protégé jumped at the offer. The new expedition was to be on a far larger scale than any of its predecessors, for Nordenskiöld was to winter on the north coast of Spitzbergen and was to push on thence over the ice as far as the conditions permitted. One of the first questions to be considered was that of draught animals, and, with a view to deciding the rival merits of dogs and reindeer, Nordenskiöld repaired to Greenland to get up the case for the dogs, while Dickson conducted inquiries into the ways of the deer. It was during this visit to Greenland that Nordenskiöld made his first raid upon the inland ice, of which details are given elsewhere. The result of these inquiries was a verdict in favour of the deer, the reasons being that they were the more easily fed and that they could be killed and eaten if the expedition chanced to run short of provisions.

No pains were spared to make the equipment as complete as possible, and, accompanied by two provision ships, the *Gladen* and the *Onkle Adam*, the party sallied forth on their adventures with high hopes of accomplishing great things. The fates, however, were against them, and a heavy misfortune befell them soon after their arrival at their winter quarters in Mussel Bay. The original plan had been that the convoy ships should unload and should then return home, but, on September 16, a terrific storm arose, as a result of which the ships found themselves so firmly beset in the ice that there was no prospect of escape that year. Furthermore, the reindeer took advantage of the storm

to effect their escape, and only one of them was ever found again. This was especially unfortunate, as Nordenskiöld had been depending upon them not merely for the prosecution of his plans, but also for that supply of fresh meat which would be so necessary if scurvy were to break out.

As there were now 67 mouths to feed instead of 24, the only course for the commander to pursue was to cut down the daily rations by one-third, and this he accordingly proceeded to do. The men took the misfortune in a spirit of praiseworthy resignation, but their fortitude was strongly tried a few days later when the news was sprung upon them that six walrus-vessels had been frozen in at Point Grey and Cape Welcome, that their crews numbered 58, and that, with care and economy, their provisions might be made to last till December 1, after which they would have to ask Nordenskiöld to help them. It need hardly be said that the explorer was not overjoyed at the prospect, more especially as with so many to feed and so little to eat it was morally certain that they would all starve to death before the end of the winter. Fortunately, however, he knew that a Swedish settlement at Cape Thörsden, some 200 miles away, had been abandoned that year, and that a good store of provisions had been left behind. He accordingly bargained with the hunters that some of their party should repair thither, and that he would support the rest to the best of his ability when their own stock of provisions had run out. With a view to economising his own so far as possible he tried the experiment of converting his now useless reindeer moss into bread. The recipe is not one to be com-

mended to the notice of epicures in search of a novelty, but it was found to be just eatable. This precaution, however, fortunately proved unnecessary, for two of the walrus-ships were released in a gale, and the hunters made their escape. Those of them who went to Cape Thörsden showed such a complete disregard for the laws of hygiene that they all died during the winter.

As was only inevitable in the circumstances, outbreaks of scurvy were frequent, but they proved amenable to treatment. The huntsmen of the party were lucky enough to shoot seven reindeer, which formed a welcome addition to the poorly filled larder. "These," says Leslie, "were reins in winter dress. The whole body was covered with a very close winter coat of hair several inches thick. The head, nearly indistinguishable from the neck, was short and thick, with broad nose and eyes visible on careful scrutiny. The trunk appeared shapeless, and the legs short and clumsy. This peculiarly shapeless appearance is owing not merely to the coat of long hair, but also to the thick layer of fat with which at this season the whole mass of muscle therein is surrounded. It is, indeed, surprising how this animal can collect such a mass of fat in Spitzbergen, where the vegetation is so scanty and the summer so short. In spring, even in the end of June, they are only, as people say, skin and bone; but in autumn, by the end of August, and throughout September, they resemble fat cattle, and have their flesh so surrounded and impregnated with fat that it is for many nearly uneatable."

As soon as spring came round Nordenskiöld set out upon his northern journey. Any hopes that he might

have entertained of being able to push far north were soon dashed to the ground, for at Seven Islands he found the ice so bad that it was useless for him to attempt to cross it. He decided, therefore, to proceed with what was really the more valuable work of examining North-East Land, with a view to determining its geological structure and to settling its eastern limit, which had always been a vexed question. Round the shore the ice was rough and hummocky, and going was slow in consequence. On June 1 the explorers were obliged to take to the inland ice, the sea front of which, it may be said, presents the largest known glacier. Here their way became perilous as well as merely difficult. "Scarcely had we advanced 2000 feet," says Nordenskiöld, "before one of our men disappeared at a place where the ice was quite level, and so instantaneously that he could not even give a cry for help. When we, affrighted, looked into the hole made where he disappeared, we found him hanging on the drag-line, to which he was fastened with reindeer harness, over a deep abyss. He was hoisted out unhurt." Accidents like these were of frequent occurrence, while the monotony of the journey was also varied by a long series of canals 30 to 100 feet wide, with vertical walls sometimes 40 feet high. These canals were often crossed by snow bridges which had a way of collapsing under the travellers' feet, but none of the men came to any serious harm.

Nordenskiöld's original plan of making for Cape Mohn was put out of the question by an impassable terrain, and he accordingly descended into Hinlopen Strait at Wahlenberg Bay and thence returned to his

headquarters. There the party had the good fortune to be found by the English yachtsman, Leigh Smith, who relieved them of all fears for the future.

Valuable though Nordenskiöld's earlier voyages were, it is, perhaps, as the discoverer of the North-East passage that his name will be best remembered. For centuries the idea of finding a way to China along the coast of Asia had been allowed to lapse, largely, of course, because other and easier routes were open to all those who cared to use them. In 1875, however, the subject was revived, and Oscar Dickson expressed himself willing to fit out an expedition which should be commanded by Nordenskiöld. It was thought advisable to send out a small preliminary expedition to spy out the way, and accordingly in the same year Nordenskiöld started off in the *Proven*, a small ship of 70 tons, and succeeded in reaching the mouth of the Yenesei, a feat never before accomplished. The value of his journey was, however, rather discounted in some quarters, and many authorities held that his success was largely due to the fact that the ice was unusually favourable in that year, and that he would be unable to repeat the performance in any ordinary season. With a view to silencing these critics, Nordenskiöld sailed from Tromsö in the *Ymer* on July 25, 1876, and anchored off the mouth of the Yenesei on August 15, thus proving the Arctic route to be perfectly practicable, and opening up a way which has since proved of some value.

These two successes made Nordenskiöld all the more determined to make the complete voyage from Tromsö to the Behring Strait; and so convincingly did he

argue his case, that he succeeded in obtaining a grant from the Swedish Diet, which, with contributions from Oscar Dickson, King Oscar, and M. Sibiriakoff, enabled him to fit out the *Vega*, and to set sail in her from Tromsö on July 21, 1878, accompanied by the collier *Express*, the *Frazier*, with a cargo for the Yenesei, and the *Lena*, which was to make for Yakutsk.

The Kara Strait was perfectly free of ice, and here the *Vega* took the coal from the *Express* into her own bunkers. The dreaded Kara Sea was also safely negotiated, and on August 10 the two ships of which the expedition now consisted were lying off the mouth of the Yenesei. From this point onward Nordenskiöld was in a state of nervous tension, for he might at any moment be pulled up by the ice. Cape Chelyuskin, however, the most northerly point of Asia, was rounded successfully, the New Siberian Islands were passed, and on September 12 the *Vega* was nearing the promontory of Irkaipi, on the other side of which lay the Behring Strait, the *Lena* having left her at the river after which she was named.

Nordenskiöld was now within 120 miles of his destination, and his ambition to complete the passage in a single voyage seemed on the verge of fulfilment, when his ship was caught in the ice, and so firmly frozen in that all hopes of getting her free again that winter had to be abandoned. The *Vega* was lying off a Chukche village, and Nordenskiöld and his assistants at once set about gaining some knowledge of the manners and customs of the natives. One of them, he tells us, "carried a Greek cross on his neck. He appeared to have been baptised, but his Christianity did not amount to much.

He crossed himself with much zeal to the sun in our presence. This was the only trace of religion or religious observance that we could discover." During his intercourse with the natives, Norquist succeeded in learning about a thousand words of their languages, while other members of the party made many valuable ethnographical observations.

On July 18, 1879, the *Vega* was set free, and on the 20th she rounded the East Cape, thus being the first ship to accomplish the difficult passage in a single journey.

CHAPTER XXVI

THE STORY OF THE "JEANNETTE"

THERE is a double interest attached to the voyage of the *Jeannette*, for not only is the story itself one of the most terrible tragedies in the whole history of Arctic exploration, but, as will be seen later, it was the fate of the unlucky ship which prompted Nansen to formulate his plan for reaching the Pole by forcing his ship into the ice, and allowing her to drift north with the current.

The *Jeannette* expedition owed its inception to Mr J. G. Bennett of the *New York Herald*, who had frequently shown his interest in Arctic research by equipping and sending out vessels at his own expense. He purchased the *Pandora* from Sir Allen Young, renamed her the *Jeannette*, and placed her under the command of Commander De Long, who had been a member of the relief expedition sent out to the succour of the *Polaris*. Admirably fitted out in every detail both for navigation and for scientific research, the *Jeannette* set sail from San Francisco on July 8, 1879. After a brief call at St Michael's, where she took on board sledges, furs, dogs, and two Alaskan dog-drivers, she set sail once more and made for Behring Strait.

The plan of the expedition was to spend the winter at Wrangel Land, and then to push on northward, if

possible to the Pole. Unfortunately for De Long's arrangements, however, the Wrangel Land of the geographers of the day had no real existence, and he was destined never to reach it. For over a century it had been held, on the strength of Chuckche reports, that a vast continent existed to the north of Asia, which extended right across the Pole to Greenland. No less an authority than the great Petermann himself believed in it, and the reports of the American whaler, Thomas Long, who discovered Wrangel Land in 1867, and of other whalers who followed him, tended to confirm this theory, for the newly discovered land seemed to be of considerable extent. Accordingly, De Long had every reason to suppose that here he would find comfortable quarters for the winter.

He was very soon to be disillusioned, however, for before he was within a hundred miles of the land, the *Jeannette* was caught in the ice, and from that time onward her story bore a painful resemblance to that of the *Tegetthoff*, without any of its compensations. Drifted constantly westward by the ever-moving pack, now nipped till her seams almost sprang apart, now threatened with a terrible destruction by the frozen waves of ice which rolled down upon her, she was before long reduced to a most pitiable plight. Here is the description penned by her chief engineer, G. W. Melville, of an event which was of almost daily occurrence:—

“It was observed that, during the continuance of the wind, the whole body of ice moved evenly before it; but, when it subsided, the mass that had been put in

motion crowded and tumbled upon the far-off floes at rest, piling tumultuously upward in a manner terrific to behold. It was in one of these oppressive intervals succeeding a gale, when the roar and crash of the distant masses could be distinctly heard, that the floe in which the *Jeannette* was embedded began splitting in all directions. The placid and almost level surface of ice suddenly heaved and swelled into great hills, buzzing and wheezing dolefully. Giant blocks pitched and rolled as though controlled by invisible hands; and the vast compressing bodies shrieked a shrill and horrible song that curdled the blood. On came the frozen waves, nearer and nearer. Seams ran and rattled across them with a thundering boom, while, silent and awestruck, we watched their terrible progress. Sunk in an amphitheatre about five-eighths of a mile in diameter lay the ship, the bank of moving ice puffed in places to a height of 50 feet, gradually enclosing her on all sides. Preparations were made for her abandonment; but—what then? If the mighty circle continued to decrease, escape was hopeless, death inevitable. To think of clambering up the slippery sides of the rolling mass would be equal folly with an attempt to scale the falling waters of Niagara.”

Summer came on the heels of winter, but it brought no prospect of release to the wretched crew of the *Jeannette*. They had already drifted past the northern coast of Wrangel Land, and had found it to be nothing but an island of moderate dimensions, and there were no signs of that mythical continent upon which De Long had been pinning his hopes. The new year found them still held in the relentless grip of the

pack. Here is the comment upon his situation which De Long penned in his diary:—

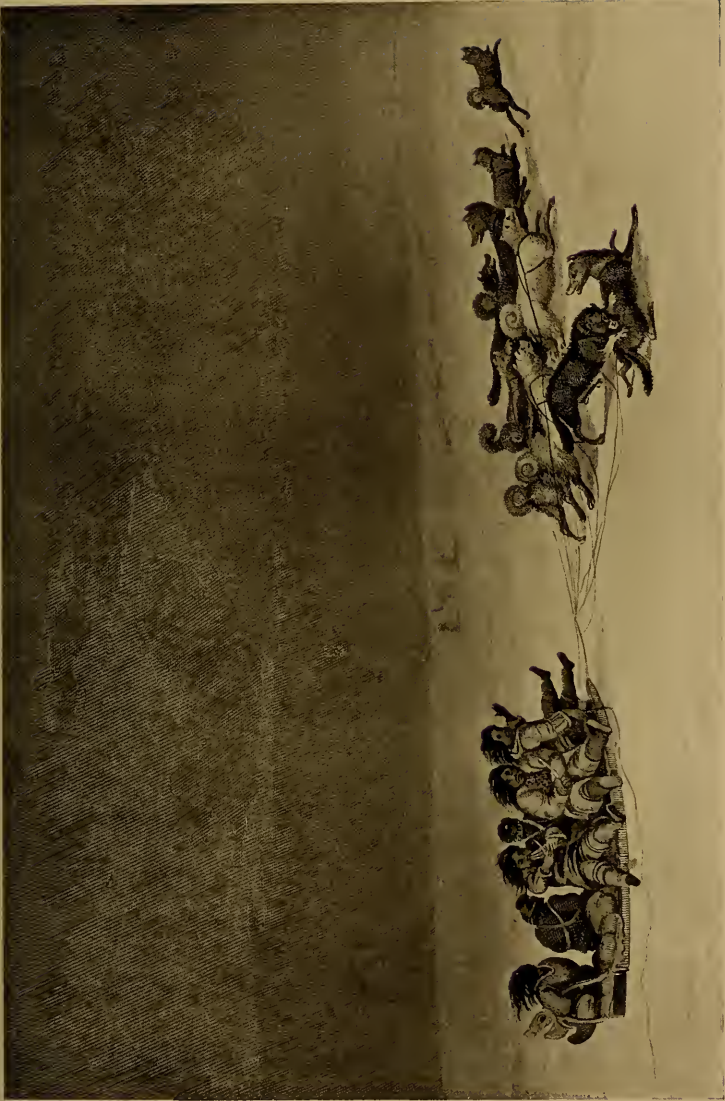
“People beset in the pack before always drifted somewhere to some land; but we are drifting about like a modern *Flying Dutchman*, never getting anywhere, but always restless and on the move. Coals are burning up, food is being consumed, the pumps are still going, and thirty-three people are wearing out their lives and souls like men doomed to imprisonment for life. If this next summer comes and goes like the last without any result, what reasonable mind can be patient in contemplation of the future?”

On May 16 a slight diversion was caused by the discovery of two islands, which they named Jeannette Island and Henriette Island. De Long started off on a sledging expedition to them, and, like many other Arctic explorers, had great trouble with his dogs, which, in accordance with the traditions of their race, refused to face the open water, and had to be dragged, sledges and all, through every lead that intersected their path. “There is no greater violence done the eternal cause of truth,” says the commander, “than in those pictures where the Eskimos are represented as calmly sitting in shoe-shaped sledges with the lashes of their long whips trailing gracefully behind, while the dogs dash in full cry and perfect unison across smooth expanses of snow. If depicted ‘true to nature,’ the scene changes its aspect considerably; it is quite as full of action, but not of progress. A pandemonium of horrors—dogs yelling, barking, snapping, and fighting; the leaders in the rear and the wheelers in

the middle, all tied in a knot, and as hopelessly tangled up as a basketful of eels."

On Sunday June 12 the pressure became so tremendous that the ship cracked in every part. She at once began to fill, and the men set to work to remove on to the ice everything necessary for a sledge journey to a place of safety. Towards four o'clock on the following morning the man on watch suddenly burst into the tent. "Turn out if you want to see the last of the *Jeannette*," he cried. "There she goes! There she goes!" "Most of us," writes Melville, "had barely time to arise and look out, when, amid the rattling and banging of her timbers and iron work, the ship righted and stood almost upright; the floes that had come in and crushed her slowly backed off; and as she sank with slightly accelerated velocity, the yardarms were stripped and broken upward parallel to the masts; and so, like a great gaunt skeleton, its hands clasped above its head, she plunged out of sight."

On that day they started off with their nine sledges and five boats on their journey of 150 miles to the New Siberian Islands. They carried sixty days' provisions with them, and had not the men been in an enfeebled condition, and had not circumstances been against them, they could easily have accomplished the distance. As it was, they were too weak to drag all their sledges and boats in a single load, so that every mile of the journey had to be covered seven times, while an unfortunate northerly drift carried them miles out of their course. At last, however, the New Siberian Islands were reached, and, after a short rest, the crew started off in their boats, with only seven days' provi-



ESKIMOS SLEDGING

FROM A DRAWING BY CAPT. LYON

sions, for the *Lena Delta*. The first cutter was commanded by De Long, the second cutter by Lieutenant Chipps, and the whaleboat by Melville. A storm separated the three boats soon after they had started, and of Chipps and his men nothing more was ever heard. De Long landed on September 16, 1881, near the mouth of the *Lena*, and he and his companions started off on a long march of ninety-five miles for the nearest settlement. They had provisions for seven days, and their chances of reaching their destination seemed good. Circumstances, however, were once more against them, for they found their way crossed by unfordable tributaries, and, as they had been obliged to abandon their boat, there was nothing for them to do but to wait until ice should bridge over the streams.

On October 6 the first death occurred, and on the following day the miserable party ate their last provisions. To press forward was impossible for most of them, so weak and ill had they become, while to stay where they were meant certain death. De Long and Ambler, the doctor of the party, however, determined to send on two men to find assistance, while they themselves heroically remained behind to take care of their dying comrades. The rest of their story cannot be better told than by quoting extracts from the commander's diary:—

"Missed Lee. Went down a hole in the bank and camped. Sent back for Lee. He had turned back, lain down, and was ready to die. All united in saying Lord's Prayer and Creed after supper. Horrible night."

“October 17, Monday—one hundred and twenty-seventh day. Alexey dying. Doctor baptised him. Read prayers for sick. Mr Collins’ birthday—forty years old. About sunset Alexey died. Exhaustion from starvation.”

“October 22, Saturday—one hundred and thirty-second day. Too weak to carry bodies of Lee and Kaack out on the ice. The doctor, Collins, and I carried them round the corner, out of sight. Then my eye closed up.”

“October 30, Sunday—one hundred and fortieth day. Boyd and Görtz died during the night. Mr Collins dying.”

And here the brave commander’s diary tragically ends. Some months later Melville, who had made his way to the coast in a less inhospitable region, and had organised a search-party as soon as he heard of De Long’s plight, came upon the camp.

“Suddenly,” he says, “I caught sight of three objects, and one of these was the hand and arm of a body raised out of the snow. . . . I identified De Long at a glance by his coat. He lay on his right side, with his right hand under his cheek, his head pointing north, and his face turned towards the west. His feet were drawn slightly up, as though he were sleeping; his left arm was raised with the elbow bent, and his hand, thus horizontally lifted, was bare. About four feet back of him, or towards the east, I found his small notebook, or ice-journal, where he had tossed it with his left hand, which looked as though it had never recovered from the act, but had frozen as I found it, upraised.”

During his ill-fated cruise, De Long not only made a number of valuable physical observations in an unknown region, but he also proved the Siberian Ocean to be a shallow basin dotted with islands, and exploded the theory of a great continent to the north of Asia.

CHAPTER XXVII

LEIGH SMITH AND THE "EIRA"

NOT a little of our knowledge of Spitzbergen and Franz Josef Land is due to the exertions of that able yachtsman and hunter, Leigh Smith, of whom mention has already been made in connection with his rescue of the unfortunate Swedes at Mussel Bay. Leigh Smith first comes into the story of Arctic Exploration early in the 'seventies, when in a series of three voyages, he examined the coast of Spitzbergen and corrected several errors which then obtained credence concerning the outline of North-East Land. Valuable as were the scientific results of these voyages, however, we need not concern ourselves particularly with them, and it is not until 1880, when he paid his first visit to Franz Josef Land, that we have to enter into the story of his doings in any detail.

Experience had taught him that discoveries could always be made in the icy seas by perseverance and by promptly seizing any opportunities that might arise, so, when he decided to make another expedition northward, he made up his mind to sail for the Spitzbergen seas, to conduct a careful examination of the ice over a large area, and then to prosecute his researches in the direction which seemed most promising. With this end in view, he had built for himself a steam yacht of 360 tons burden and 50 horsepower, which he named

the *Eira*, and with a company of twenty-nine, he set sail for the north in June 1880.

His first objective was Jan Mayen, but he was prevented from examining that interesting island by the fact that it was, as usual, enveloped in a thick mist. He next turned his attention to the east coast of Greenland, which, of course, still offers a splendid field to the adventurous explorer, but here again he was foiled, for the coast was so encumbered by ice that it was impossible for him to approach it. He then shaped his course for Spitzbergen, but falling in with the two famous whalers, David and John Gray, he learnt that the ice was equally bad in that direction. Accordingly, he determined to try his luck in the Barents Sea, and to discover once and for all whether there was a practicable sea-route to Franz Josef Land. Payer and Weyprecht had, of course, found their way thither in 1871, but as we have seen, they had been drifted there with the ice; a Dutchman named De Bruyne had actually sighted its high land in 1879, but he had not succeeded in reaching it; while, in the same year, Captain Markham, in his little yacht the *Isbjörn*, had pushed as far north as lat. $78^{\circ} 24'$, and had come to the conclusion that a steamer ought to be able to make its way through the loose ice with which the sea was cumbered without very much difficulty. There was, therefore, every reason for Leigh Smith to hope that he would be able to reach those shores which had never been visited since they were first discovered.

Though the sea was covered with ice and dense fogs were of frequent occurrence, he succeeded in bringing the *Eira* through in safety, and on August 14 she was

lying at anchor off May Island, which is situated just to the south of Hooker Island. Continuing her journey, she steamed past Barents Hook, round the southern shore of Northbrook Island, and up to Bell Island, between which and Mabel Island an excellent anchorage was found and named Eira Harbour. Making that his base, Leigh Smith surveyed the coast-line in all directions, adding about 110 miles to the maps, and forming an interesting collection of the flora and fauna of the country. Towards the end of August the weather became threatening, so he determined to bid farewell to Franz Josef Land for that year, as he was not prepared to spend a winter there.

With a view to convincing doubters that the voyage to Franz Josef Land would be practicable in any year, he set out on his second voyage thither in the following summer. The *Eira* was more hampered by ice than had been the case before, but on July 23 land was sighted, and Leigh Smith set his course for Cape Ludlow. After exploring much of the coast-line which he had been unable to reach during his previous visit, he made for Bell Island, off which he anchored on August 6.

He had just finished examining Cape Flora and was thinking of turning eastwards, in the hope that he might pick up some traces of the lost *Jeannette*, when a calamity took place which completely upset all his plans. For one fine Sunday morning, when the weather was beautifully calm, and there seemed to be nothing to fear, the pack-ice suddenly came down with the tide, and the *Eira* was caught between it and the land floe. She was protected by a grounded berg, and for a while

no injury was done to her. Then, without any warning, the berg gave way, the *Eira* heeled over, and the water came pouring into her hold, probably through a hole made by a tongue of ice. The pumps were tried, but without much effect, so all hands were set to work, passing provisions and anything else that they could save out on to the ice. Within two hours she was at the bottom, in eleven fathoms of water.

There was now nothing for the men to do but to make the best of a bad business, and to set about preparations for the winter. Fortunately the land abounds with bears and walruses, and thanks to the united efforts of the crew and of Bob, their retriever, the larder was soon filled with a sufficient store of meat to last them comfortably till the spring. Bob seems to have been a veritable Nimrod among dogs, and to have combined an enthusiasm for hunting with an unusual degree of sagacity. On one occasion, while out for a constitutional by himself, he came upon a herd of sea-horses, and succeeded in conveying the intelligence to his human friends, to the great benefit of the larder. On another occasion, he decoyed a bear right up to the door of the hut, where it was promptly shot, while he once nearly died a sportsman's death in the embrace of a moribund bear, which, in his zeal, he had approached rather too closely.

All the boats had fortunately been saved, and the winter was spent in making preparations for a voyage to Nova Zembla, where, it was hoped, succour would be found. This hope was amply fulfilled, for, on reaching their goal after six weeks of very hard work, they fell in with the Dutch exploring steamer, the

Willem Barents, and later on with the *Hope*, which had been sent out to their relief by the British Government, and by which they were conveyed home none the worse for their experiences.

Leigh Smith's voyages were valuable not only scientifically but also commercially, for he showed that walruses abound in those seas, a piece of knowledge of which hunters have availed themselves to the full.

CHAPTER XXVIII

GREENLAND AND THE EARLIER JOURNEYS OF NANSEN AND PEARY

ON the whole of the earth's surface there is probably no more desolate and uninviting country than Greenland. Extending for a distance of over 1400 miles from north to south, and of some 900 miles from east to west at its broadest point, almost the whole of it is covered with a permanent ice-cap, which probably attains in places a depth of 3000 feet, and on which it is absolutely impossible for a human being to sustain life for long.

Some small portions of the coast are inhabited by tribes of Eskimos and by settlers, while here and there traces remain of its early Norse discoverers, many of them probably Christians, as Holm, in 1880, found ruins of four stone churches in the Julianshaab district. These settlements are confined to small areas on the western coast; the eastern coast, with the exception of a small tract between Cape Bismarck and Cape Farewell, whither a few Eskimos migrated from the Parry Islands, is entirely uninhabited. This coast, indeed, protected as it is by an almost impassable barrier of ice and shrouded by perpetual fog, has never been very thoroughly explored, in spite of the persistent efforts of generations of daring travellers. During the earlier

days of Arctic exploration, Hudson, the Dane Daniell, Gale Hamke, Han Egede and his son, Olsen Wallör, and other whalers mapped out small sections of the coast, but their discoveries did not amount to very much.

In 1822, however, Captain William Scoresby, jun., one of the most famous of Scottish whalers, visited the coast, and, in the intervals of fishing, succeeded in charting and sketching it from Hudson's Cape Hold-with-Hope to Gale Hamke Bay, making at the same time a number of valuable astronomical and trigonometrical observations. Captain Edward Sabine, while engaged on his great pendulum work of 1823, visited Pendulum Island with Captain Clavering, who explored much of the coast in the neighbourhood, the field which he thus opened up being later developed by Koldewey, with whose voyage in the *Germania* we have already dealt. Among others who have contributed to our still scanty knowledge of this desolate land are Blossville, Wandell, Graah, Giesecke, Rink, Dalager, Jensen, Steenstrup, Knutsen, Knudsen, Eberlin, Garde, Ryder, Drygalski, and Nathorst, thanks to whose efforts much of the east coast has been mapped out.

For centuries even less was known of the great ice-cap which forms the interior, and, until recently, it remained practically untrodden by the foot of man. The Eskimos believed it to be the abode of the Kivittogs, or sorcerers, and would not attempt to penetrate it, while few of the explorers who had the hardihood to venture upon it succeeded in achieving much. In 1870 Nordenskiöld and Berggren, the naturalist, succeeded in penetrating it to a distance of thirty-five miles from

Aulaitivik Fiord, and discovered a true ice-plant and a dust of cosmic origin, which the geologist named kryokonite. Repeating the attempt in 1883, Norden-skiöld, after fifteen marches, reached $48^{\circ} 15' W.$, at an elevation of 4900 feet. Seeing that it was impossible for him to proceed much farther, he sent on two Laps on skis, who covered another 140 miles, and reported on returning that, though they had reached an elevation of 6600 feet, the ice-field still rose steadily.

The first man to cross Greenland from one coast to the other was Dr Fridtjof Nansen, who was later to win still further fame for himself by his daring attempt to cross the North Pole in the *Fram*. Nansen was born on October 16, 1861, and from his earliest youth he displayed the keenest interest in natural science and that absolute contempt for danger which proved of such immense service to him later on. It was in 1887, while curator of the Bergen museum, that he first announced his intention of crossing that terrible ice-cap which had hitherto defied the efforts of even the hardest explorers. The announcement was greeted with ridicule, but, nevertheless, he received over forty applications from would-be companions, and the sum of £300, the estimated cost of the expedition, was presented by a generous Dane.

No sooner had it been made possible for him to carry out his plans than he set about the preparations for the journey. Not only was it necessary for him to select his companions and to arrange all the details of the route which he proposed to follow and the equipment which he meant to take with him, but he also thought it advisable to test the various kinds of skis

and snowshoes on which the trip was to be made, and to accustom himself to hardships by sleeping on a snow mountain protected from the cold by only a bag.

His companions were to be five in number, and consisted of Otto Sverdrup, a retired ship's captain; Lieut. Dietrichson, of the Norwegian army; Christian Christiansen Frana, a peasant from North Norway; and two Laps, named Balto and Ravna. Nansen's plan was daring in the extreme, for he proposed to land on the east coast of Greenland, and to make his way as best as he could to the west. It will be obvious that, having once embarked upon the trip, the party could not possibly turn back. Ahead of them lay civilisation and food; behind them lay nothing but an uninhabited and inhospitable coast, where they would be compelled to die of starvation should they return to it. By adopting this route, therefore, he burnt his boats behind him.

In May 1888 Nansen and his companions sailed from Norway in the sealer which was to take them to Greenland. They had made an arrangement with the captain that business was to come first, and that he was not to go out of his way to land them. Accordingly it was not until July 17, when the ship happened to be within two miles and a half of the shore, that the explorers were able to put off in their two boats. As we have had occasion to point out more than once, the east coast of Greenland is generally encumbered with ice, and Nansen found that reaching the shore was by no means so easy a matter as he had anticipated. For many days they were drifted about with the pack, sometimes being carried as far as thirty miles out to sea, and

it was not until July 29 that they were able to effect a landing. Even now, however, they were not able to start immediately across the ice-cap, for in the course of their wanderings they had been carried 200 miles to the south, and it was necessary for them to make a toilsome journey northward before, on August 10, they were able to set their course for the west coast.

They found at once that it was quite impossible for them to travel by day, as the snow was so soft that very little progress could be made. Even at night the conditions were but little better, for their way lay over rough and hummocky ice, which was frequently intersected by chasms, and rain fell in torrents; consequently they were only able to cover a few miles on each march. As they travelled upward, however, towards that high plateau of which Central Greenland consists, the cold grew more intense, with the result that the ice became firmer, and they were able to travel by day. The cold, however, though it brought relief to them in one direction, was not without its disadvantages, for they were unable to find any more drinking water, and were obliged to content themselves with snow, which they melted in flasks carried at their breasts.

The upward journey occupied them about three weeks, and it was with the utmost relief that they found themselves at last on the plateau, at an elevation of about 9000 feet. The ascent had been terribly steep, the work of dragging the five sledges had been excessively arduous, and so much time had consequently been spent, that Nansen determined to change his

course, and, instead of pressing on to Christianshaab, to make for Godthaab, his nearest point in a south-westerly direction. The second half of the journey afforded a very pleasant contrast to the first. Abandoning the biggest of the sledges and binding the others together in couples, the explorers set sail and sent them racing down the slope while they glided beside them on their skis. As they neared the coast they were obliged to go more cautiously, for they very nearly tumbled head over heels down the first of the precipices which break up the ice-cap at this point.

With some difficulty they succeeded in reaching the shore, and here the party split up. Nansen, Sverdrup, and one of the Laps made a crazy and exceedingly uncomfortable boat out of willows, in which they sailed to the Eskimo settlement of New Herrnhut. Here they were received by a missionary, and a party was sent back for the others, who arrived in safety on October 16.

Nansen had intended to return to Norway that autumn, but the last ship had sailed, and he was consequently obliged to spend the winter at Godthaab. He ultimately reached home at the end of May, in the happy knowledge that he had performed a feat which had hitherto been considered impossible, and that he had proved the interior of Greenland to be a vast ice-field. The journey had cost him far more than he had originally anticipated, but the deficit was soon made good by private subscription.

Nansen was not the only man of the time who was attempting to solve the riddle of Central Greenland, for before he set out on his daring journey, the brilliant

young American, Lieutenant Peary, had already begun that series of raids upon the inland ice which were eventually to be attended by very remarkable results.

Peary is a native of Maine, and he began his career as an engineer in the United States navy. He seems, however, to have been predestined by nature for the life of an Arctic traveller, for, as Sir Clements Markham well put it, he combines "forethought and prudence in planning his operations with great skill and undaunted resolution in carrying them into execution"—qualities which more, perhaps, than any others go to make a successful explorer. It was in the year 1885 that he first turned his attention seriously to that branch of work with which his name is now so intimately connected. Realising that there was still a vast field for research in Central Greenland, he then suggested to the academies and learned societies of the United States that he should undertake an expedition thither, with a view to pursuing scientific investigations in that practically unknown country, and to discovering once and for all whether or not Greenland was an island. The idea was taken up enthusiastically, and sufficient funds were soon raised to enable him to carry his plans into execution.

His first trip was more or less tentative, for he was at that time totally inexperienced in Arctic travel, and it was, of course, necessary for him to find out exactly what difficulties he would have to encounter on such a journey as that which he proposed to undertake. Leaving America in May 1886, he was soon at Godhaven, where he met his friend Christian Maigaard, a prominent official in those parts, who intended to accom-

pany him on his journey. Thence he sailed up the Pakitsok Fiord, at the end of which lay his starting-point. After carefully reconnoitering the glacier and discovering a tongue of ice which seemed reasonably accessible, he started off with Maigaard and two Eskimos, their equipment consisting of a couple of sledges and provisions for about three weeks. Their way did not lie in particularly pleasant places, for the ice-field was intersected with innumerable crevasses which needed a good deal of negotiation. He found, however, that travelling was by no means impossible, and the party succeeded in penetrating the interior to a distance of about a hundred miles before lack of provisions compelled them to beat a retreat.

He returned to America more enthusiastic than ever about his plans for exploring the north of Greenland, and fully convinced that he could accomplish great things there, given the opportunity. It was not, however, until the year 1891 that he was able to set out on his second journey on the steamboat *Kite*, commanded by Captain Richard Pick. On this occasion he was accompanied by his wife; Dr Cook, the distinguished ethnologist; Gibson, an ornithologist; John Verhoeff, a mineralogist; his own coloured servant; and last, but by no means least, by Elvind Astrup, a young Norwegian who did splendid work not only on this but also on Peary's later expeditions. There was also on board a party of nine men of science, with Professor Heilprin at their head, whose task it was to make researches and observations while Peary was away on his long journey.

One serious misadventure marked the passage out,

as Peary had the misfortune to break his leg, with the result that he was absolutely helpless when the party landed at M'Cormick Bay, and was precluded from taking part in any of the short autumn trips round Inglefield Gulf.

The first days after their arrival at the bay were, of course, spent in the erection of the portable dwelling which they had brought with them, and to which they gave the name of Redcliffe House. As soon as spring came round Peary, who, under the care of his wife, had completely recovered, set off on a short sledge journey round Inglefield Gulf, on which Mrs Peary accompanied him.

It was not, however, until May 14 that he started on the long journey which was to be the crowning glory of his expedition. The first part of the journey was slow, for it took him a week to round Inglefield Gulf, during which time he discovered no fewer than thirty glaciers, ten of them of the first magnitude. On reaching the divide between Whale Sound and Kane Sea, he sent back two of the four men who had set out with him, and with Astrup as his only companion he pushed on north. On June 26 they reached the northern edge of the inland ice and, unable to proceed any further in that direction, they turned south-east in the hope that they would succeed in making the east coast of Greenland. Following the extreme limits of the ice-cap their journey brought them, on July 4, to a large indentation, which they named Independence Bay, in honour of the day. From the top of a tremendous cliff, 4000 feet high, they obtained a magnificent view of the land all round them, a view which left no doubt whatever in their minds that Greenland was an island.

Of the twenty-one dogs with which they had started only eight now survived, and as they were a full 450 miles from home, they had no choice but to make the best of their way back to Redcliffe House, which they reached without misadventure on August 6. The *Kite* arriving a few days later, Peary and his companions returned to America. Their party, however, had been reduced by one member, for the mineralogist, John Verhoeff, had been overtaken by a snowstorm when out hunting for specimens and had never been heard of again.

Peary's experiences convinced him that there was a vast field for discovery in the north of Greenland, and he promptly set about raising the money for a third expedition by delivering lectures on his experiences. The result of his efforts was so entirely satisfactory that the autumn of 1893 saw him once again established in Whale Sound. On this occasion, however, he was able to find far more satisfactory quarters in Bowdoin Bay, an indentation on the north shore of Inglefield Gulf, where he erected Anniversary Lodge, a house which might truly be said to have the most modern improvements, in that it was actually lit by electric light supplied by a dynamo, for the working of which his steam launch was responsible.

On August 29 Astrup and three companions set out with the object of laying down *caches* of provisions for the great spring journey. Unfortunately, however, they had only deposited two *caches* when Astrup was taken ill, and they had to hurry home without properly locating the spots.

On September 12 an exceedingly interesting event



PEARY'S TRAVELLING EQUIPMENT

took place, for Mrs Peary, who was again a member of the expedition, presented her husband with a daughter. To Miss Peary consequently belongs the honour of having been born in a higher latitude than any other civilised being.

It was on March 6, 1894, that Peary set out on his spring journey accompanied by seven men, twelve sledges and ninety-two dogs, and with sufficient provisions to last for six months. Unfortunately, however, the weather was by no means so favourable as it had been on his previous journey. The cold was intense, and his men were frost-bitten and his dogs frozen to death before his eyes. Sending back the greater number of his party, Peary pushed on pluckily with three companions, but circumstances were too much for him, and he had to confess himself beaten in the end. When he finally reached Bowdoin Bay, on April 15, only twenty-six dogs out of the original ninety-two remained to him.

The rest of the spring and the early part of the summer were spent in exploring and mapping out the unknown shores of Melville Bay. During the course of one of these journeys Peary reached Cape York, where he "unsnowed" two gigantic meteorites, the reports of which had attracted many previous explorers, none of whom, however, had managed to find them. Later on he succeeded in conveying them to America, as well as a third of such vast proportions that its removal entailed several months of hard work.

In August the *Falcon* came to fetch the explorers, but Peary was by no means satisfied with his year's work, and though prudence undoubtedly demanded

that he should return at once, seeing that he was short of provisions and fuel and that he had no means of knowing whether or not a ship would be able to visit him during the following year, with characteristic determination he proclaimed his intention of staying at Bowdoin Bay for another year with two volunteers, Hugh Lee and his coloured servant Henson. So, sending the rest of his party home, he set about making preparations for the winter. The greater part of the autumn was spent in gaining Eskimo recruits, in hunting and in attempting to find the *caches* laid down by Astrup. In the last of these enterprises Peary failed completely, but the hunting was very fairly successful, with the result that he and his two companions were able to spend the winter in comparative comfort. The spring journey was begun on April 2, 1895, the party consisting of Peary himself, his two volunteers, four Eskimos, and sixty-three dogs, drawing four sledges. The Eskimos did not prove of much assistance as one of them deserted with his outfit on the third day, while, a little later, Peary had to send back the remaining three. With Lee and Henson he now pushed on in the face of appalling difficulties. Snow-storms raged around them, obliterating their landmarks and so concealing their *cache* of pemmican that it was nowhere to be found. Lee was frost-bitten, the dogs died one after another, and game was conspicuous by its absence, yet Peary persevered and, by dint of almost superhuman efforts, he arrived within a short distance of Independence Bay early in May. Here he was so fortunate as to kill ten musk-oxen, but no other game of any kind was to be found, and they now found

themselves under the necessity of rushing back to the camp with all possible despatch. They had only nine dogs left and food for seventeen days, but by going on short rations and making forced marches they succeeded in winning their desperate race against starvation. They were only in the nick of time, however, for when they reached Bowdoin Bay, on June 25, they had eaten their last scrap of food, while only one dog remained to them out of the sixty-five with which they had started. The *Kite* calling for them later in the summer, they reached Newfoundland in September after one of the most hazardous journeys on record.

CHAPTER XXIX

THE JACKSON-HARMSWORTH EXPEDITION

IT was, no doubt, the success which attended Mr Leigh Smith's expedition that first directed the attention of another well-known English explorer, Mr F. G. Jackson, to Franz Josef Land, and led him to think seriously of undertaking an expedition thither, with a view partly to surveying that still almost unknown country and partly to pushing on, if possible, another step towards the Pole.

Mr Jackson first published the plans of his proposed journey in 1892, but, though they were very generally approved by those who were experienced in Arctic research, no one seemed particularly anxious to provide the necessary funds. Accordingly, in 1893, he determined to undertake an expedition to the Yugor Straits, with the double object of exploring Waigatz Island and of testing the equipment which he proposed to use on his voyage to Franz Josef Land. His trip was attended by complete success, and when he had accomplished the task which he had set himself, he determined to extend his journey round the White Sea and through Lapland, in order that he might become conversant with the ways of the Laps as well as with those of the Samoyads, with whom he had been travelling. We may mention incidentally that

it was on this journey that he first learnt the value of the hardy Russian ponies which proved of such inestimable service to him on his later expedition.

It was while he was still far from home that he received a telegram conveying the welcome news that Mr Alfred Harmsworth (now Lord Northcliffe) had generously undertaken to provide the funds for the journey to Franz Josef Land of which he hoped such great things. He did not return to England immediately, thinking that the objects of his new expedition would be better served if he were to continue his investigations in Lapland. These completed, he hurried back and instantly set about his preparations for his forthcoming campaign.

His first care was, of course, to select a vessel suitable for the conveyance of his party and his stores to the unknown country which he was to explore, and his choice finally lit upon the *Windward*, a steam whaler of 461 tons. The expedition was to be provisioned for three years, and with such care and good sense was the equipment prepared, that nothing that the travellers could possibly need during their lengthy stay in the Arctic regions was omitted. Mr Jackson was no less fortunate in the selection of his staff, and much of the great success which attended his expedition was due to the work of his doctor, Reginald Hettlitz; his botanist, Mr Harry Fisher; and his mineralogist, Mr Child.

The *Windward* set sail down the Thames in July 1894, and early in August she reached Archangel, where she took on board a number of dogs, four ponies, and three portable houses. The passage across Barents

Sea was not unattended by difficulties and occupied some eleven days, while another fortnight was spent in tacking about before Bell Island, a nearer approach to the land being made impossible by the girdle of ice which surrounded it. On September 10, however, the *Windward* cast anchor off Cape Flora, the westernmost point of Northbrook Island, and here the party erected their winter house, to which they gave the name of Elmwood.

Mr Jackson made it evident at once that he had at any rate one of the qualities essential to a successful Arctic explorer, in that he was a splendid disciplinarian. He was convinced that if good health was to be preserved, every member of his party must be kept constantly busy, so he saw to it that his men always had plenty of occupation. If they were not at work, they were sent out hunting, game being exceedingly plentiful on the island. If they were not hunting, they were made to play football or other games. The results triumphantly justified his methods, for during the three years that they spent on Franz Josef Land not a member of his party had an hour's illness and not a single man had to knock off work through indisposition. The crew of the *Windward*, on the other hand, who were not under his immediate supervision, and who were allowed to please themselves as to how they occupied their time, became subject to scurvy, to which several of them succumbed.

The winter passed without incident, and as soon as spring came round they set about trying their sledges and making preparations for their first journey of exploration. This was begun on April 16, and in the

course of it Jackson and his two companions, Lieutenant Armitage and Blonkvist, pushed north as far as Back Island, where Nansen and Johansen were destined to build their winter hut four months later. They were prevented from going much further, however, by the fact that their way led them through a mixture of snow and mud, which their ponies were quite unable to negotiate; accordingly there was nothing for them to do but to make their way home to Elmwood House.

In June the *Windward* got up steam and set sail for England, leaving the explorers behind. Her voyage proved to be one of the most trying description, for so dense was the pack that it took her sixty-five days to plough her way through it. No provision had been made for such an eventuality, and she soon found herself short of coal, with the result that she had to burn her masts, her bridge, and any other timber that she could spare in order to keep her engines going.

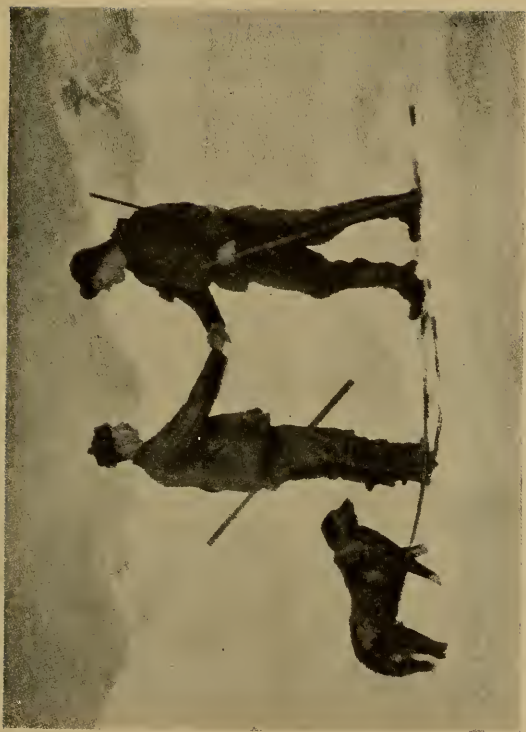
Meanwhile Jackson and his companions, having been foiled in their attempt to penetrate far to the north, turned their attention to the vast tract of undiscovered country which lay to the west of them, and they spent the rest of the summer in exploring and mapping out Alexandra Land as far as Cape Mary Harmsworth.

Two serious losses befell them during their second winter at Cape Flora, in that one of their ponies was found hanged in its stable one morning, while another fell sick and died. Otherwise, however, the winter months passed without incident.

The spring was spent in another trip north along the shores of British Channel, during the course of which Jackson and his companions added islands and capes

innumerable to the map of Franz Josef Land. Their discoveries, however, though of great geographic value, need not be recorded at length here, and it was not until June 17 that an event occurred of which we must give any detailed account. We leave Mr Jackson to tell the story in his own words.

“Just after dinner,” he writes, “Armitage came rushing down to tell me that through his field-glass he could see a man on the floe to the S.S.E. of Cape Flora, about four miles off. I could hardly believe it; such a thing seemed utterly impossible, and thought he had mistaken a walrus on the ice for a man, but having got a glass I could see he was correct. I could also make out somewhat indistinctly a staff or mast, with another man apparently standing near it close to the water’s edge. It occurred then to me that it might be one of my own men, although they had all been at dinner a few minutes before, but I, however, found that all were present. I got a gun with all speed, and firing off a shot on the bank to endeavour to arrest the stranger’s attention, I started off to meet him coming across the ice. . . . On our approaching each other, about three miles distant from the land, I saw a tall man on ski with roughly-made clothes and an old felt hat on his head. He was covered with oil and grease, and black from head to foot. I at once concluded from his wearing ski that he was no English sailor, but that he must be a man from some Norwegian walrus sloop who had come to grief and wintered somewhere on Franz Josef Land in very rough circumstances. His hair was very long and dirty, his complexion appeared to be fair, but dirt prevented me from being sure on



THE MEETING BETWEEN JACKSON AND NANSEN

this point, and his beard was straggly and dirty also. We shook hands heartily, and I expressed the greatest pleasure at seeing him. I inquired if he had a ship. 'No,' he replied, 'my ship is not here.'—rather sadly I thought—and then he remarked, in reply to my question, that he had only one companion, who was at the floe edge. It then struck me that his features, in spite of the black grease and long hair and beard, resembled Nansen, whom I had met once in London before he started in 1893, and I exclaimed:—

“ ‘ Aren't you Nansen? ’

“ To which he replied :—

“ ‘ Yes, I am Nansen. ’

“ With much heartiness I shook him by the hand and said, ‘ By jove, I'm damned glad to see you ! ’ ”

Such, then, was the unexpected meeting between two explorers who were both trying from different directions to solve the problem of the frozen north. It was as well for Nansen and his companion that that meeting took place, for they had to confess that they were hopelessly lost, and small wonder, for Payer's map of the north of Franz Josef Land was quite unrecognisable, while, as their watches had run down, they were unable to discover their longitude. Now, however, their troubles were at an end, and they were saved from the necessity of attempting that awful voyage to Spitzbergen in two frail kayacks, a voyage which must almost inevitably have resulted in their deaths.

Jackson lost no time in taking the two weary travellers back to his hut, where they were refreshed with a good meal and a wash and brush up—the first in which they had been able to indulge for a year. We

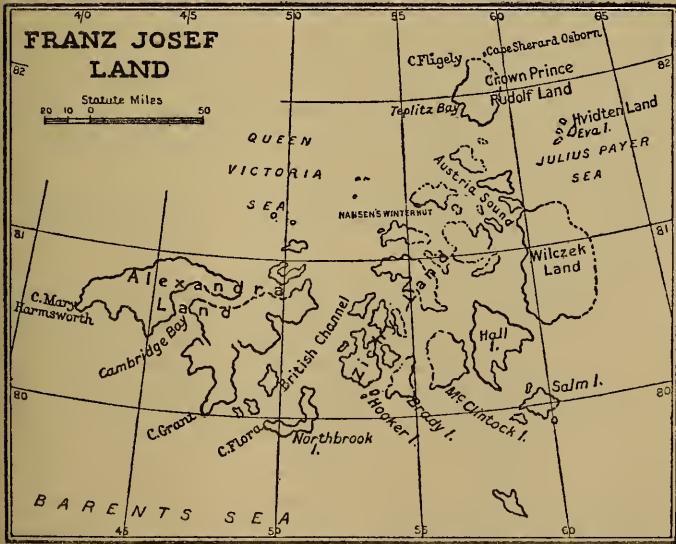
are told that so begrimed were they after their journey, that the first application of soap and water had almost as little effect upon them as it had upon the historic tramp who washed and washed till he came to a flannel shirt. Time and honest endeavour, however, made their due impression, and Nansen and Johansen were soon able to boast that they cut as respectable figures as any of their companions.

The two explorers had, of course, much in common, and they soon became such fast friends that Nansen's pleasure at the arrival of the *Windward* on July 26 and the prospect of an immediate return to the civilised world which it brought with it, was tempered by very real regret. However his course was naturally obvious, and when the ship, after discharging the stores which she had brought for Jackson, sailed once more for England, she took with her Nansen and Johansen, as well as Blonkvist, whose health would not stand another winter in the Arctic, and Fisher, the botanist, who had now completed his researches into the flora of Franz Josef Land.

During the ensuing year Jackson continued his exploration of the new land, and his labours were always attended by the happiest results. The sum of them was to prove that it consisted of a cluster of islands, separated from one another by channels in which ran exceedingly rapid currents. These currents, keeping the ice constantly in motion, often made travelling exceedingly difficult, but they ensured open waterways, in which walruses abounded. He further proved that several countries hitherto marked on the maps, such as Gillies and King Oscar Lands, did not exist at all, and

made countless scientific observations of the greatest value.

He had hoped that he might be able to extend his visit to Franz Josef Land over another year, with a view to making an effort to push north. This, however, was not to be, and when the *Windward* called for him on August 6, the force of circumstances compelled him and his party to return home to England. This they accordingly proceeded to do, having first established a depot of provisions for the benefit of Andrée, should fortune direct the course of that intrepid explorer thither.



CHAPTER XXX

NANSEN AND THE "FRAM"

A CAREFUL study of the history of Arctic travel had convinced Nansen that the routes by which most of his predecessors had attempted to reach the North Pole were either impracticable or else beset by such difficulties that he who could overcome them would be fortunate indeed. Vessels attempting to penetrate far to the north had always been stopped by an impenetrable barrier of ice. Travellers trying to make the journey by sledge had found the ice so rough and the movements of the pack so disconcerting, that they had been invariably compelled to turn back before they were very far on their way, while, so far as has yet been discovered, there is no land in a sufficiently northerly latitude to form a suitable base.

The experiences of the *Jeannette*, however, turned his thoughts in another direction. It will be remembered that that ill-fated vessel was caught in the ice near Wrangel Land and drifted thence to New Siberia, where she went down. Three years later there was found, frozen into the drift-ice in the neighbourhood of Julianshaab, on the south-west coast of Greenland, a number of articles which had obviously come from the sunken vessel. These articles were first discovered by the Eskimos, and were after-

wards collected by Mr Lytzen, colonial manager at Julianshaab, among them being a list of provisions signed by De Long, a pair of sealskin breeches marked with the name of Louis Noros, one of the *Jeannette's* crew, the peak of a cap belonging to Nindemann, another of the sailors, and a manuscript list of the ship's boats.

Professor Mohn, in a lecture delivered before the scientific society of Christiania, showed that these articles must have drifted across the Pole, a theory which was supported by the fact that Siberian larches had often been found on the east coast of Greenland; and Nansen came to the conclusion that where they could drift he could drift too. His proposal to put his theory to the test was greeted with a hurricane of disapproval, especially as it involved the abandonment of the well-known Arctic canon never to leave the shore. He was told that human hands could not construct a ship which could withstand the enormous pressure of the winter ice, and that he was simply throwing away the lives of himself and of those who accompanied him. Nansen, however, thought otherwise, and in October 1892 a specially-built vessel was launched at the mouth of the Christiania Fiord, and was christened by Mrs Nansen the *Fram*—anglice, "Forward."

The sides of the *Fram* were thirty inches thick, and strengthened with stanchions at points where the pressure was expected to be greatest, while her hull was specially shaped in the hope that she would rise when squeezed by the ice. She was only 128 feet long, but very broad of beam. Her speed, under steam and sail, was expected to be eight or nine knots an hour

in very favourable circumstances; under steam alone she was not expected to average more than three knots, but speed was not, of course, a primary consideration. Her crew consisted of thirteen, and included Captain Sverdrup, Lieutenant Johansen, who was destined to accompany Nansen on his perilous journey over the ice, and Lieutenant Scott-Hansen, who was chiefly responsible for the scientific observations.

The *Fram* set sail from Christiania on June 24, 1893, and was soon making her way along the north coast of Europe. On August 4 she entered the dreaded Kara Sea, but it was not until the end of the month, when off Taimur Island, that she met with her first serious opposition from ice. Here Nansen discovered a new group of islands, and at one time he thought that he would be obliged to make their closer acquaintance by wintering off them. Fortunately, however, a storm broke up the ice on September 6, and he was able to proceed on his way past Cape Chelyuskin. He had intended to call at Olenek for dogs, but the summer was so far advanced that he did not dare to linger on the way, so he pushed north past New Siberia and entered the pack at lat. $78^{\circ} 50'$ on September 29.

As soon as the ice had really gripped the vessel and there was no further prospect of release, preparations for the winter were set on foot. The rudder was shipped, the hold was cleared out to make room for a joiner's shop, the engine was taken to pieces and a mechanical workshop set up in its room, a smithy was erected, tin-smith's work was done in the chart-room, and shoemaker's and sailmaker's work in the saloon. "There was nothing," says Nansen, "from the most delicate in-

struments down to wooden shoes and axe handles that could not be made on the *Fram*. When we were found to be short of sounding line, a grand rope-walk was constructed on the ice. . . . There was always something to occupy us, and it was not difficult to find work for each man that gave him sufficient exercise and so much distraction that the time did not seem to him unbearably long."

It is not to be supposed, however, that Nansen did not suffer occasionally from ennui; and this was especially the case when the *Fram*, to his disgust, was drifted steadily south-west for several weeks. Presently, however, she started once more on her northward journey, and from that time onward her course gave her crew little cause for dissatisfaction, though she did not approach the Pole quite so nearly as had been hoped; the ship, moreover, behaved herself splendidly in the ice and resisted the most serious pressures. Contrary to the opinion of many experts, who had held that, frozen into the pack as she would be, she could not possibly rise from her bed and thrust the oncoming ice beneath her, she would sometimes be raised so high above the surface that her bottom was almost visible.

Though Nansen saw from the *Fram's* drift that she would follow very nearly the course he had anticipated, he thought that still more might be accomplished, and that the sea which lay beyond the ship's route could be more thoroughly examined if he and a companion left her with dogs and sledges. Such an expedition could not, of course, hope to find the vessel again, as she would be constantly changing her whereabouts, and it

would be like looking for a needle in a bottle of hay. The prospect of being obliged to find his own way home to civilised regions did not, however, deter the explorer, and, leaving Sverdrup in command, he started off on March 14, 1895, accompanied by Johansen, with twenty-eight dogs, three sledges, two kayacks, thirty days' food for their dogs, and a hundred days' rations for themselves.

The venture was rash almost to the verge of madness, but Nansen and Johansen entered upon it with such spirit and pluck that they succeeded in carrying it through successfully, though not without suffering fearful hardships. High-piled ridges of ice, on the slopes and summits of which the snow never had time to collect, were constantly forming in their path, and over these the men had to drag the sledges while the dogs, who did not care for that kind of amusement, sat down and looked on. To their great disappointment, too, the ice grew worse and worse as they journeyed north, till at last, on April 7, Nansen climbed to the top of the highest point that he could find, and saw nothing but packed, piled-up ice right on to the horizon, looking, as he says, "like a rough sea that had been petrified." Such being the case, he came to the conclusion that it would be folly to continue the struggle, so, having reached lat. $86^{\circ} 14'$ N., the farthest point attained up till then, he and Johansen determined to turn south and make for Franz Joseph Land.

Soon after they had started on the return journey they came upon better ice and progressed rather more rapidly. Unfortunately, however, in their anxiety to push on, they occasionally made inordinately long

marches, with the result that, when they halted for the night on April 12, more than thirty-six hours had elapsed since they last pitched their tents, and their watches had run down. They were able to make a reasonably good guess at the time, but from that day onward they were never able to obtain their longitude with any certainty.

The inaccuracy of Payer's map, too, gave them a great deal of worry. Naturally believing in the existence of Petermann's Land, they expected to sight it towards the end of April. May passed, however, and then the beginning of June, and still no land came in sight. By the 22nd of the month travelling had become so arduous that, having shot three bears and a seal, thus relieving themselves of all fear of starvation, they determined to wait till the warmer weather had melted the snow. It was not until July 22 that they started once more on their way, and two days later their eyes were gladdened with the sight of land. To reach it, however, was no easy matter, for the ice was broken up by numberless channels which were covered so thickly with crushed floe that it was impossible for them to use their kayacks. Accordingly they were obliged to jump from one piece of ice to another, dragging the sledges after them—a most hazardous proceeding which often nearly resulted in disaster.

It was while they were preparing to negotiate an open lead that an incident happened which almost cost Johansen his life. Nansen was busy with his kayack, which he was holding with one hand to prevent it from slipping into the water, when he heard a

scuffle behind him, and Johansen's voice cried out, "Take the gun!"

Looking round, he saw that an enormous bear was throwing itself on his companion, who was lying on his back. He tried to seize his gun, which was lying on the fore-deck, but the kayack slipped out of his grasp into the water. "You must look sharp if you want to be in time," said Johansen quite quietly, and Nansen, making a supreme effort, just managed to clutch his gun and shoot the bear before it was on its prey.

After immense labour they succeeded in reaching Frederic Jackson Island, and here they decided to spend the winter, as they realised that it was too late in the season for them to attempt the long and dangerous voyage to Spitzbergen. Accordingly they set about building a hut and shooting walrus and bears, of which they found such an abundance that they had soon placed themselves beyond the possibility of starvation. The hut was small, but it was fairly comfortable. "By the aid of the lamps," says Nansen, "we succeeded in keeping the temperature at about freezing-point in the middle of the hut, while it was, of course, lower at the walls. The latter were covered with a thick coating of frost and ice, which in the lamplight gave them such a splendidly marmoreal appearance that in our happier moments we could dream that we dwelt in marble halls."

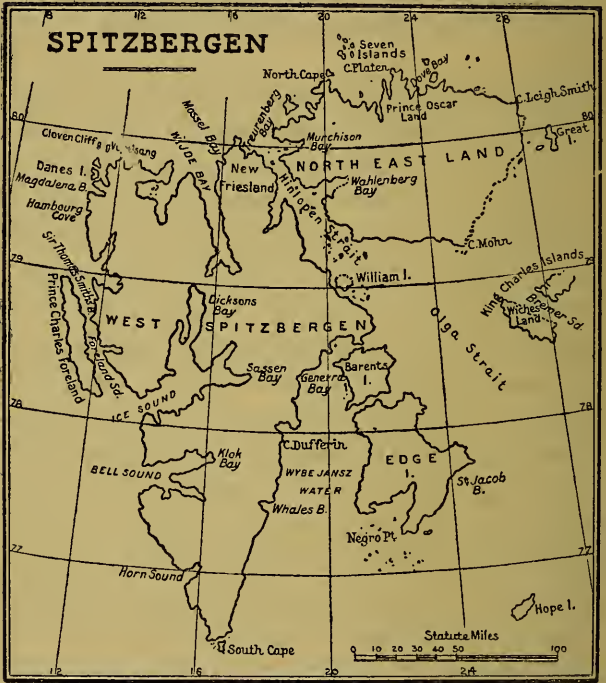
They had nothing whatever to do, so for twenty hours out of the twenty-four they remained in bed, which, consisting as it did of huge, hard stones, was

not particularly comfortable. Christmas Day they celebrated by turning their shirts inside out. Their clothes, by the way, were always a source of worry, for washing was a problem which they were quite unable to solve. They succeeded in keeping their persons fairly clean, partly by scraping themselves with knives and partly by rubbing in bear's fat and wiping it off with moss; but though they tried the effect of boiling their underclothing and then scraping it with a knife, the plan did not answer very well, and they pined for a cake of soap.

On May 19 they started off once more, and managed to make fairly good progress either on the ice or in open water. They had one or two accidents, one of which might have resulted disastrously, for the kayak which had their provisions and guns on board started off on a voyage on its own account, leaving them on shore. Nansen was obliged to swim after it, and became so exhausted in the struggle with the bitter water that he was only just able to reach it and scramble over the gunwale. Their troubles, however, were now at an end, for, when preparing breakfast one morning, Nansen heard dogs barking. At first he could hardly believe his ears, but the sound came nearer and nearer till at last there could be no doubt about it. Rushing off on his skis to learn the solution of the mystery, he met F. G. Jackson, from whom he received the warmest welcome. As, however, we have described the meeting in the chapter devoted to the Jackson expedition, we need not dwell on it again here.

In the meanwhile the *Fram* drifted steadily on with

the ice, reaching, on October 16, almost as high a latitude as that attained by Nansen. She pursued her journey to the edge of the pack without misadventure, and after a series of blasting operations she was set free of the ice and made her way home in safety.



CHAPTER XXXI

CONWAY AND ANDRÉE

THOUGH Nordenskiöld had succeeded in exploring North-East Land pretty thoroughly, and had shown that it is practically nothing but one large ice-field, for many years very little attention had been given to West Spitzbergen, and up till the end of last century nothing whatever was known about its formation or its geographical features. In 1896, however, the famous mountaineer, Sir Martin Conway, seeking for fresh worlds to conquer, decided to repair thither himself and to elucidate once and for all the mystery that surrounded that part of the world.

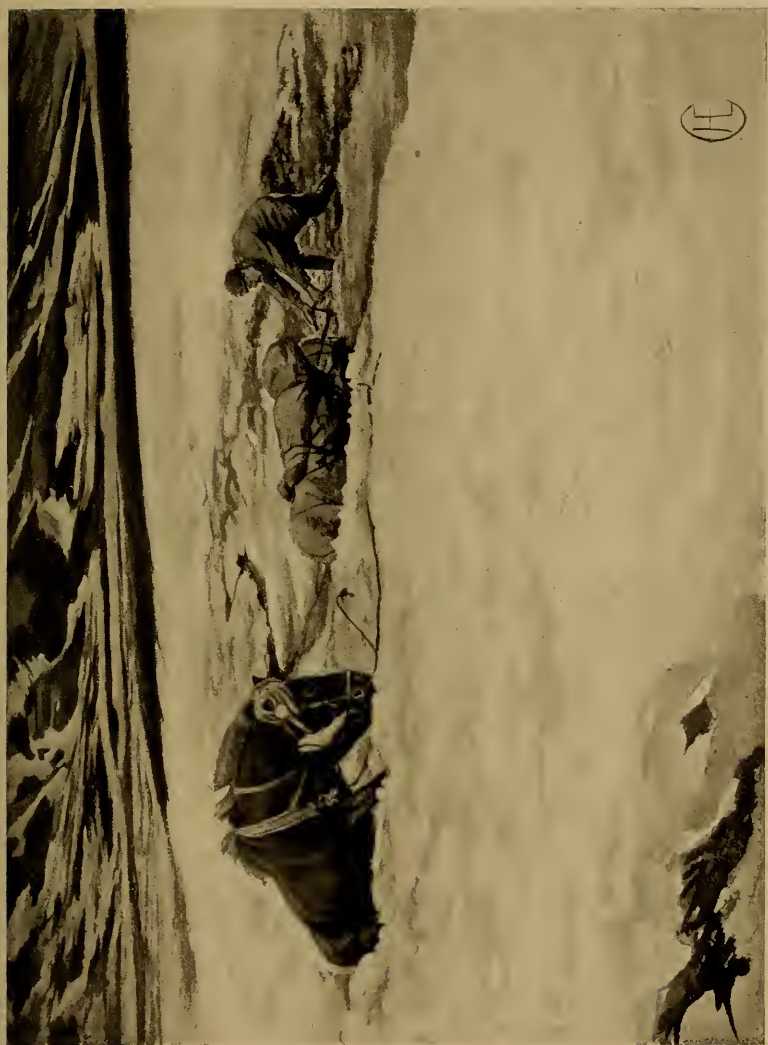
Information concerning the nature of the regions over which he proposed to travel was, of course, difficult to obtain. However he read all the literature that existed upon the subject, and having equipped himself with the Nansen sledges and ponies which, he gathered, would be absolutely essential for success, he started off on his travels with a party consisting of Mr E. J. Garwood, his photographer, Dr Gregory, the geologist, Trevor Battye, the ornithologist, and, as artist, his nephew, H. E. Conway.

On reaching Advent Bay, which he proposed to make his starting-place, he was surprised to find an inn in the process of erection by an enterprising Norwegian company. An inn in an uninhabited

country like Spitzbergen might seem *de trop*, but the explanation was that a series of trips had been organised thither, and a steamer was bringing out tourists once a week, most of whom were probably attracted by Andrée's balloon, then waiting at the north end of the island for a chance to start on its hazardous voyage.

Leaving three members of his party to prosecute their scientific researches near the coast, Conway and Mr Garwood set off on their journey across the island on June 20. It was not long before they discovered that their sledges and ponies were nothing but a handicap. They had expected, of course, to find the interior covered by a great ice-sheet like that of North-East Land. They actually discovered it to be a land of temperate climate, intersected by green mountains and boggy valleys, which were kept in a condition of perpetual stickiness by the constant rain. In the mud thus formed the ponies were always sinking, and many arduous hours were spent every day in digging or pulling them out.

Conway had meant to make a hurried scamper across the island and back again. He found, however, that the island was in a process of mountain manufacture, and that the cañons in which the interior abounded, slowly eating their way into the ridges, were converting them by degrees into isolated peaks. This process he found so interesting that he determined to change his plans, and he accordingly travelled slowly on, over the magnificent Ivory Glacier, down to Fouls Bay, and then back by a route that differed slightly from that of his outward journey.



IN THE SLUSH

On reaching Advent Bay he learnt that a tourist steamer had succeeded in advancing without difficulty or danger to lat. $81^{\circ} 32' N.$, an amazing record for such a boat. Fired by this, he promptly hired the 12 ton steamer *Expres*, and started off on a trip round the coast, during the course of which he paid a visit to Wellmann's hut and Andrée's balloon. He would have liked to have done more, but there was a dangerous ice-blink in the sky, and the captain refused point-blank to venture any further in such a tin-kettle of a boat.

Sir Martin Conway paid another visit to Spitzbergen in the following year, on which he was again accompanied by Mr Garwood. On this occasion the two explorers occupied themselves chiefly with studying the formation of the glaciers.

As we have just seen, while Conway was making the first crossing of Spitzbergen, Andrée was waiting for an opportunity to start on the daring but ill-fated Expedition for the discovery of the North Pole, by which his name will always live in the annals of Arctic exploration. Andrée was a Swedish engineer and an aeronaut of unusual skill and enterprise, and it was the success of his attempt to cross the Baltic in a balloon that led him to think seriously of embarking upon that project which was to cost him his life. The idea was, it must be confessed, exceedingly tempting, and sounded feasible enough. A steady south wind would waft a balloon in a few hours to a point which a traveller over the ice could only reach after weeks of strenuous labour, and Andrée had every reason to hope that within a very short time of his departure

from Spitzbergen he would be hanging suspended over the Pole itself.

The project, though its extreme rashness was not to be denied, commended itself to many, and the æronaut had little difficulty in obtaining the necessary funds, among those who contributed to them being the King of Sweden, the late Alfred Nobel, and Baron Dickson. The construction of the balloon was entrusted to Lachambre of Paris. The material used was Chinese Pongee silk, cemented together in double, threefold, and fourfold layers, and covered with a coating of special varnish. Its cubical contents were 158,294 feet.

It was to be guided by a sail fitted with guide ropes which would drag along the ground and prevent the balloon from being driven at the full force of the wind. The difference between the velocity of the wind and of the retarded balloon was to be utilised for steering. On trial the plan was found to answer very well.

The *Virgo*, carrying with it Andrée, his balloon, and a party of geologists, left Tromsö on June 14, 1896, and nine days later a suitable place for building the balloon house was found on Danes Island. The landing of the balloon and the building of the house occupied nearly a month, and it was not until July 27 that everything was ready for a start. Unfortunately, however, the wind, which had been for the most part favourable while the preparations were in progress, now veered round, and for the rest of the summer it blew steadily from the north, when it did not drop altogether. Week after week passed by without bringing any prospects of a start, and at last Andrée was obliged to pack up his

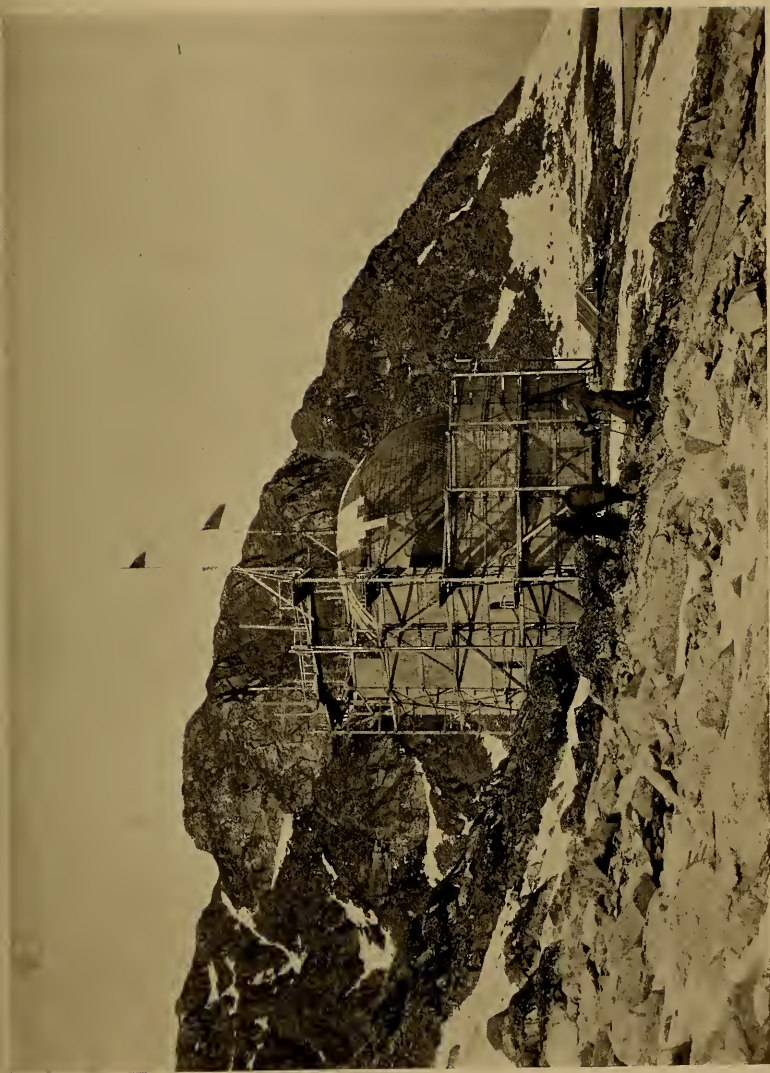
balloon and return home, hoping for better luck next year.

On May 30 he was back at Danes Island once more with his balloon, which had been undergoing sundry modifications during the winter. The house had fallen somewhat into disrepair, but it was soon put in order, and the inflation of the balloon, which was begun on June 19, was finished at midnight on the 22nd. Everything was now ready for a start, and on Sunday, July 11, Andrée decided to take advantage of a stiff breeze which had set in from the south. Standing in the car with his two companions, Fränkel and Strindberg, he gave the orders for the ropes to be cut. The balloon rapidly ascended, to a height of 600 feet, and, after a temporary drop, floated away north over the flat peninsula of Hollændernæs. It remained visible to those at Danes Island for about an hour. Then it disappeared over the northern horizon, never to be seen again.

The only news that the world ever received of Andrée and his companions after this did nothing towards solving the mystery of their fate. Of the thirteen buoys which he carried with him on board his balloon only four were ever recovered. One was picked up at Skjervö, in Norway, and was found to contain a message to the effect that it had been thrown out at 10 o'clock on the night of July 11. Another, which had been dispatched on its journey about an hour later, when the party had reached lat. 82° N., long. 25° E., was recovered off the coast of Iceland. The two remaining buoys bore no message from the explorer. On July 15, 1897, the sailors of the s.s. *Alken* shot a carrier pigeon

which had been let loose two days previously in lat. $82^{\circ} 3' N.$, long. $15^{\circ} 5' E.$, but that was the latest intelligence of the explorers that ever reached their friends at home.

Many expeditions were sent out to their rescue, and reports were brought in by natives of shots heard upon the ice and figures seen on the drifting floes. Fishermen, too, said that they had heard cries for help, and that they had seen what looked like a deflated balloon drifting on the sea. But, carefully though these clues were followed, they came to nothing, and it can only be supposed that, descending on some vast ice-field far from human aid, probably somewhere between Spitzbergen, Nova Zembla, and Siberia, the unfortunate men perished miserably of starvation and exposure.



ANDRÉE'S BALLOON IN ITS SHED

CHAPTER XXXII

THE LATER VOYAGES OF SVERDRUP AND PEARY

AS we have already seen, it was as Nansen's companion on his journey across Greenland, and as his second in command on the *Fram*, that Otto Sverdrup first acquired the taste for Arctic travel which, in 1898, led him to undertake an expedition on his own account. The primary object of his new journey was to complete the survey of the northern shores of Greenland which had been so brilliantly begun by Peary, and to discover once and for all whether there lay any land beyond it in the direction of the North Pole. Failing that, he proposed to examine Grinnell and Ellesmere Lands, of which vast tracts still remained totally unexplored.

Sverdrup sailed from Upernavik on August 5, in our old friend the *Fram*, which had been refitted for the new voyage, and was soon well on his way up Smith Sound. On reaching Hayes Sound he decided to go into winter quarters there, as it was, of course, impossible to attempt to reach a much higher latitude that season, and there was plenty of good work to be done in the neighbourhood. A couple of sledge journeys across Ellesmere Island put him in possession of many new facts concerning the geographical features of that

country, and, as soon as spring came round, he began his preparations for pushing north. Unfortunately, however, the season was very unfavourable, and he soon found that, for that year at any rate, his project of following the north coast of Greenland must be put aside, so he determined to explore Jones Sound, which had never before been followed to its juncture with the Polar Sea.

In this he was entirely successful, and when the next winter came round it found him comfortably ensconced in winter quarters on the south coast of Ellesmere Land. It was while Sverdrup was away exploring the coast that the career of the *Fram* was very nearly brought to an untimely end by fire. Fortunately, however, she was saved, and early in August she was afloat again. All serious thought of pushing up Smith Sound had now been abandoned, and instead, Sverdrup made for Belcher Channel, at the mouth of which the next winter was spent. During the spring and summer the work of exploration went merrily on, with the result that the indefatigable Sverdrup had soon added much of the unknown coast of North Devon to the charts.

On returning to the *Fram* he found, to his regret, that she was so firmly fixed in the ice that even blasting operations on a large scale had no effect, and he was, in consequence, obliged to resign himself to the inevitable and to spend another winter at the mouth of Belcher Channel. Fortunately, however, he had by no means exhausted the possibilities of that neighbourhood, and he occupied himself with making a journey north, for which cartographers have every reason to be

grateful to him, though he failed in his endeavour to reach Aldridge's farthest. In the following summer the *Fram* was set free, and was able to return to civilised regions.

Sverdrup's voyage was unrelieved by any very sensational or exciting incidents, but the work that he did during those four years was admirable. He mapped out the west coast of Ellesmere Land—a most arduous task, as it is broken up by a singularly intricate system of fiords—he discovered three large islands west of that land, he explored North Devon and the northern shores of North Cornwall and Findlay Island, and he proved that land existed north of the Parry Islands, a point on which diverse opinions had hitherto been held. Consequently, though he never reached the northern shores of Greenland for which he had set out, he had no reason to be dissatisfied with the result of his journey.

The energy and enterprise which Lieutenant Peary displayed in carrying on his chosen work in the Polar Regions aroused so much sympathy in America, that not long ago a number of those who were interested in it formed a club which they called the Peary Arctic Club, and which was founded with a view to providing him with funds for carrying on the explorations in which he had already achieved so conspicuous a success. It was principally owing to the exertions of this club that in 1898 Peary was able to set sail from Sidney in the *Windward*, which had been presented to him by Sir Alfred Harmsworth, with the double end in view of completing his examination of the northern shores of Greenland, and, if possible, of reaching the North

Pole. This expedition was, probably, the most perfectly planned that has ever set out from any shores.

The *Windward* had been preceded by the auxiliary ship the *Hope*, which, after depositing her stores at Etah, sailed for home, while the *Windward* herself tried to push on north up Smith Sound. Ice, however, proved an insurmountable obstacle, and she was obliged to go into winter quarters near Cape D'Urville, on the north side of Princess Marie Bay. Peary's plans for the autumn were threefold. In the first place, he wished to survey the land around his winter quarters, in the second place, he was anxious to obtain a supply of fresh meat for his party, and, in the third place, he intended to convey as large a supply of provisions as possible along the coast. He was completely successful in fulfilling each of these three objects. By the end of September he had explored much of the surrounding country, proving the continuity of Ellesmere and Grinnell lands, and dissipating several illusions which existed concerning Hayes Sound, which he was unable to find at all, Buchanan Bay, which had hitherto been held to be a strait, and Bache Promontory, which was popularly supposed to be an island. Early in September he relieved himself of all further anxiety concerning his supply of fresh meat, by killing a herd of seventeen musk-oxen, while, by using every ray of moonlight and often working in complete darkness, he had, by December 4, cached 3300 lbs. of provisions at Cape Wilkes. "No one," he says, "who has not had the actual experience can imagine the work and annoyances involved in transporting, in semi- or complete darkness,

those supplies along the frightful ice-foot which lines the Grinnell land-coast."

On December 20, when the winter, that is to say, was at its worst, he started off with six men and thirty dogs on a singularly unattractive journey to Fort Conger. The darkness was intense, the weather was bad and the way lay through most unpleasant places, but they stumbled on over the rough ice as best they could, and on January 6 they succeeded in reaching their destination. Peary, unfortunately, had to pay for his boldness in thus facing the Arctic winter, for he found, on arriving at the Fort, that both his feet were so badly frost-bitten that he was unable to walk, and when the time came to turn he had to be lashed to a sledge and dragged the whole way home. Worse, however, was to come, for the doctor found it necessary to amputate eight of his toes on his arrival at the ship in March, and Peary felt the effects of the operation for a long while afterwards. But he was not the sort of man to give in even to such a disaster as this, and in the early summer he insisted on making another trip to Fort Conger, in spite of the pain that walking over the hummocky ice caused him.

The *Windward* was set free in August, and proceeded at once to Etah, where Peary had decided to spend the winter, as he did not consider the ship fitted for an attempt to push northward through the ice. Here she was joined by the *Diana*, which had been sent out with supplies, and, after spending a few weeks in walrus-hunting, the two ships sailed in company for America.

During the latter part of the winter Peary and his

whole party left Etah for Fort Conger, which they succeeded in reaching by the end of March. After a few days' rest the commander, with some of his Eskimos, started off on what was to be the great event of the summer—a journey round the north coast of Greenland. The way was exceedingly rough, and days were often spent in the arduous work of hewing a way for the sledges through the rugged ice. Determination, however, made light of the great difficulties, and they pushed gamely on past Lockwood's farthest point and round the north coast of Hazen Land, till, on May 19, Peary's eyes were gladdened by a fleeting glimpse of a mountain of peculiar shape, which he recognised as the peak that he had seen rising proudly to the north when, in 1895, he stood on the ice-cap south of Independence Bay. Unfortunately, a heavy fog came down upon the party, and they were prevented from exploring the rest of the Bay before lack of provisions obliged them to start for home two days later.

Fort Conger was reached in safety, and the rest of the Arctic day was spent in laying in a supply of fresh meat for the long night. On April 17, after an ineffectual attempt to push north, Peary and his men started off for Payer Bay. Here, as he expected, he met the *Windward*, which had been sent out with supplies. All of these were taken ashore, and the rest of the summer was spent in re-establishing the line of *caches* to Fort Conger. The winter was destined to be trying, for several of the Eskimos fell ill, and Peary was consequently obliged not only to nurse and see after them, but also to do most of the hard work of

preparing for the summer journey single-handed. By February 1, however, his arrangements were complete and most of his patients had recovered, so he started for Fort Conger once more, intending to make it the base of his dash for the North Pole. It was not, however, until April 1 that he was able to leave Cape Hecla with nine sledges, and he soon found that the lateness of his departure made it practically impossible for him to win success that year. Huge pressure ridges, great masses of ice-rubble, frequent open channels and deep snow made the way almost impracticable, and on April 21, after reaching $81^{\circ} 17' 27''$, he had to make this entry in his journal.

"The game is off. My dream of sixteen years is ended. It cleared during the night and we got under way this morning. Deep snow. Two small old floes. Then came another region of old rubble and deep snow. A survey from the top of a pinnacle showed this extended north, east and west as far as could be seen. The two old floes over which we had just come were the only ones in sight. It is impracticable and I gave the order to camp. I have made the best fight I knew; and I believe it has been a good one."

There was now nothing for them to do but to make the best of their way back. They reached Payer Harbour on May 17, where the *Windward*, with Mrs Peary and her daughter on board, joined them on August 5. Shortly after this the whole party set sail for home.

Peary has since shown, however, that the passage which we have quoted from his diary was written in a

fit of momentary despondency, and that his dream of sixteen years is by no means over, for last year he set sail in the *Roosevelt* on another dash for the Pole, the results of which are now being awaited with the keenest interest.

CHAPTER XXXIII

OTHER RECENT EXPEDITIONS—ABRUZZI, WELLMANN AND TOLL

FROM his earliest days Prince Louis Amadeus of Savoy, Duke of the Abruzzi, displayed a strong taste for adventure, and while he was still very young, he made a name for himself as a mountaineer of more than average daring and skill. It was in 1897, after he had returned from a successful attempt to climb Mount Elias, the great Alaskan mountain which had hitherto proved too much for even the most intrepid adventurers, that he first conceived the idea of organising an expedition, the object of which should be the discovery of the North Pole. After spending some eighteen months in considering the problem and consulting authorities as to the best course to pursue, he purchased a whaler of 358 tons and 400 horse-power, which was originally known as the *Jason*, but which he rechristened the *Stella Polare*, and set to work to fit her out for the expedition which he proposed to make.

The *Stella Polare* was provisioned for five years, and her company included Umberto Cagni, who sailed as captain, Count Franco Quirini, who served as lieutenant, Doctor A. C. Molinelli, and three Alpine guides. Sailing from Laurvik, near Christiania, on June 14

1899, she touched at Tromsö, Hammerfest, Vardö and Archangel, where she picked up 120 Siberian dogs. Thence her course was set for Franz Josef Land, which was made in the neighbourhood of Jackson's house at Cape Flora. Finding the house in excellent condition, the Duke landed a store of provisions there to secure himself and his crew against starvation, in the event of their vessel being lost. Having taken this precaution, he continued his voyage up British Channel, passing on his way the members of the Wellmann expedition, who were being conveyed home in the *Capella*. From them he heard rumours of a new archipelago to the north of Franz Josef Land, of which, however, he subsequently failed to find any traces whatever.

Ice rendered the passage up the channel very difficult, but the *Stella Polare* succeeded in making her way along Karl Alexander Land and Crown Prince Rudolph Land, till she doubled Cape Fligely. Here further progress was totally impossible, so the Duke put back to Teplitz Bay, where he had decided to spend the winter.

On September 8 the ice in the harbour became very much disturbed, and the *Stella Polare* was nipped so severely that she sprang a leak. The engine room was soon flooded, and for three successive days and nights half the crew were at the pumps, while the rest were engaged in transferring the provisions and equipment to the shore. Thanks to the efforts of the officers and men, the ship was saved, but, being half full of water, she was perfectly useless as a place of abode, and tents had to be erected on land.

The winter was spent in making such short expeditions as the weather permitted, and it was while he was

away on one of these that the Duke had the misfortune to be caught in a snowstorm, during which two of his fingers were so badly frost-bitten, that they had to be amputated. This was particularly unlucky for him, as the wound had not sufficiently healed by the beginning of March to allow him to take part in the great sledge expedition which was to be the chief feature of the voyage. The command was, accordingly, entrusted to Captain Cagni, who started out on the 13th with general instructions to push as far north as he could. During the early part of his journey he was accompanied by two supporting parties, on whose stock of provisions he and his men were to subsist for as long as possible, in order that his own little store might remain intact until he was well on his way. The first of these parties to leave him was that conducted by Lieutenant Quirini, and it was never heard of again. The Duke sent out search parties in every direction, but not a trace of their missing comrades could they find, and it can only be supposed that they either fell down in a crevasse, or were overtaken by a storm, and frozen to death.

In the meanwhile, Cagni and his three companions pushed on northward as rapidly as possible. They found the ice comparatively smooth, and by April 25 they had reached lat. $86^{\circ} 33'$, thus beating Nansen's record by some thirty miles. Unfortunately their provisions began to give out, and they were compelled to beat a hasty retreat. The outward journey had been a comparatively simple matter, but on their homeward way they were beset by all sorts of unexpected difficulties which brought them to the very verge of starvation. The field of ice over which they were travelling was constantly drifting

in a westerly direction, carrying them further and further from the bay which they were trying to reach. Leads were always opening ahead of them, which had to be crossed by some means or other, but, though they had kayacks with them, these had been so damaged as that they were hardly seaworthy, while it was often quite impossible to use them amidst the constantly shifting ice. On several occasions Cagni had to cross a channel on a small piece of floe, taking with him a rope by which his companions, with their impedimenta, were towed across on a larger block, while once a short voyage was made on a large sheet of ice which was propelled by means of the sails of the kayacks. Moreover, their provisions were getting very low, and for the last fortnight of their voyage they were obliged to subsist entirely on their dogs. Of the eighty with which they started out on their journey, only six remained when at last they reached the ship.

To attempt to spend another winter in the ice with the ship in so bad a condition would have been folly. Accordingly, the leak in the *Stella Polare's* side was found and stopped, she was released from her bed of ice by means of gun-cotton, and on September 6 she was safely back at Hammerfest.

It was in 1894 that the American paper, the *New York Herald*, sent out Mr Walter Wellmann to search for Nansen and to make for the North Pole if conditions permitted. Leaving Tromsö on the first of May in the *Ragnald Jarl*, he set his course for Spitzbergen, which he proposed to make the base of his sledge expedition, and his ship was soon lying off Walden Island. A fortnight later Wellmann set off



THE "POLAR STAR" UNDER ICE PRESSURE

north with a party of thirteen men and an equipment of the most improved design. He had only been travelling for about four days, however, when a sailor brought him the unpleasant tidings his ship had been crushed to pieces by the ice, and that but little had been saved. Wellmann, however, was not to be deterred from carrying on his plans, and he sent back orders to the captain to build himself a hut out of the wreckage, while he himself pushed pluckily forward. Unfortunately for him the ice soon became so rough that further progress was out of the question, and he was obliged to abandon the attempt when six miles north of the east of the Platen Islands. Eventually the whole party made its way back to America in safety.

Undiscouraged by his first experiences, Wellmann started out again in 1898 with a view to completing the exploration of Franz Josef Land. Reaching Cape Flora on July 28, he found Jackson's houses still in perfect condition, and, acting with Sir Alfred Harmsworth's permission, he proceeded to transfer one of them to Cape Tegetthoff, which he proposed to make his headquarters. During the next few months he succeeded in mapping out much of that part of Franz Josef Land which was still unknown, and he would doubtless have accomplished more had he not unfortunately fallen down a small crevasse and injured his leg so severely that he was obliged to order a retreat.

At the present moment Mr Wellmann is considering a plan for reaching the North Pole by airship, in which he hopes to have the co-operation of M. Santos-Dumont.

Profiting by the advance of science and the experiences of their predecessors, Arctic explorers have, of course, reduced the danger of travelling in the frozen regions to a minimum, and it is very rarely that an expedition ends in tragedy. In recent years, indeed, with the exception of Captain Cagni and his party who perished during the Duke of the Abruzzi's expedition, only four men, Baron Toll, F. G. Seeberg, and their two hunters, have lost their lives in the cause of science in the Arctic regions.

The principal field of Baron Toll's Arctic investigations lay among the islands of the Siberian Ocean, whither, from the year 1885 onwards, he conducted a series of brilliantly successful expeditions, all of which added greatly to the world's knowledge of the geology, meteorology, botany, and palæontology of these unexplored lands. He started out on his last journey on July 22, 1900, in the splendidly equipped laboratory ship *Sarya*, which was provisioned for four years, with the object of continuing the work by which his name had already become famous. The first winter was spent at Taimur, at the mouth of the Khatanga, and in the following summer he rounded Cape Chelyuskin, paid a visit to Bennett Island, and was ultimately frozen into Nerpchya Bay, where he met an auxiliary expedition sent out under Volossovich. On June 20 he set out with the astronomer, F. G. Seeberg, and two hunters on a journey of exploration. From a record subsequently found on Bennett Island by Lieutenant Kolchak, we know that the party followed the north coast of Kotelnyi and Thadeef Islands, keeping their course towards New Siberia. Here the ice broke up,

and, taking to their boats, they reached Bennett Island on August 26. The record ends with these words: "To-day we are going southwards. We have provisions for 14 to 20 days. All in good health." That is all we shall ever know of the fate of Baron Toll and his companions.

M. Brusneff is of opinion that they must have perished on their way across from Bennett Island to New Siberia. Before they could have reached the end of that journey the weather was becoming cold and ice must have been forming upon the sea, making it impossible for them to cross it in their boats. They had only provisions for a fortnight or three weeks, and little prospect of adding to their supplies, while, to make matters worse, they had no warm clothing with them. It is to be feared that the latest victims claimed by the Arctic regions must have suffered severely before death brought them release from their troubles and robbed the world of two of its ablest and most enthusiastic men of science.

So ends the story of Arctic exploration up to the present time. Those who have read these pages cannot fail to have been impressed by the gallantry with which generations of brave men have willingly faced, in the cause of science, the terrible privations and sufferings only to be met with in the frozen North, or to have felt proud of the part which Great Britain has played in solving the secrets of the Polar regions. Yet, dangerous though the service unquestionably is, it is a fact that at no time in the whole of its history has the death-rate among those engaged in it exceeded the average death-rate of the navy, while so immense

has been the advance made in the science of Arctic travel during recent years that the risks attending it have now been reduced to a minimum.

Much has been accomplished, but much still remains to be done. There is around the Pole a tract of over two million square miles which have never yet been visited by a human being, and there can be no doubt that if this tract can be made to give up its secrets the world of science will profit immensely. The Pole itself still remains to be conquered, and though it is difficult at present to see how that terribly arduous journey over the rough seas of palæocrystic ice is to be accomplished, science will doubtless find a way. Of this, at any rate, we may be sure; so long as the Pole retains a single secret, there will not be wanting brave men who will gladly go through any dangers, and suffer any privations, if they can but wrest it from its prison of ice.



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The Edinburgh Geographical Institute



**CHART OF THE
NORTH POLAR REGIONS**

BY J. G. BARTHOLOMEW, F.R.G.S.

Scale of Latitudes 1:100,000
Natural Size

See white lines of Peak for colored Light Blue



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